

BATMAN
No. 49

OCT...NOV.
TEN CENTS



A 52 PAGE
MAGAZINE

BATMAN

1,001 THRILLS
as
**BATMAN and
ROBIN**

MEET THE REAL
THIEF of BAGDAD-

The Joker
in
**"BATMAN'S
ARABIAN
NIGHTS"**



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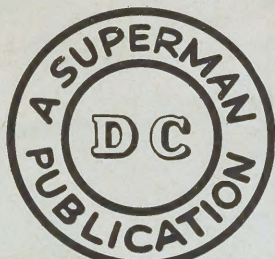
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Printed in U.S.A

BATMAN

WITH
ROBIN
- THE BOY WONDER -

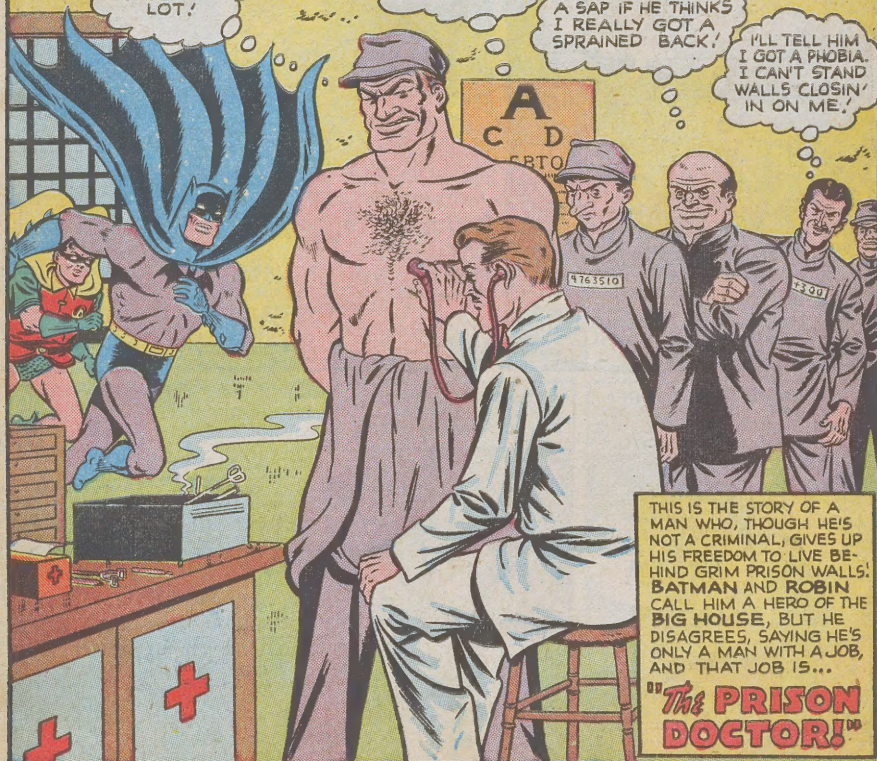
BOB
KANE

HE KIN BE
FOOLED! I'LL
COUGH A
LOT!

I'LL TELL THE DOC
MY STOMACH
CAN'T TAKE
PRISON FOOD!

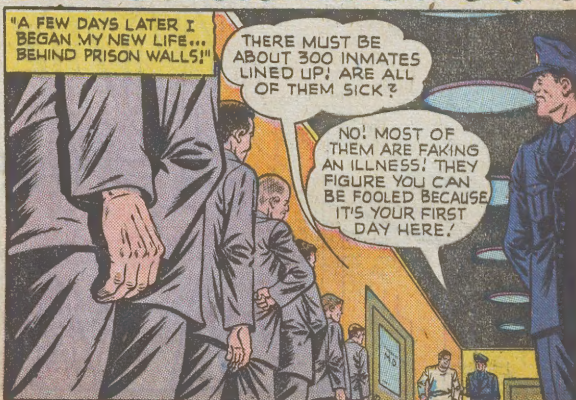
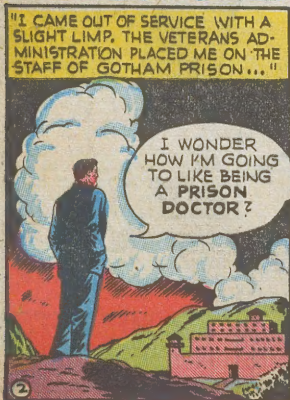
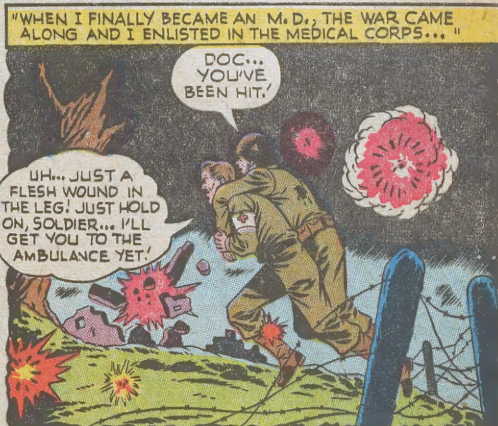
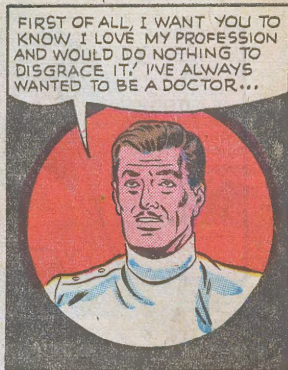
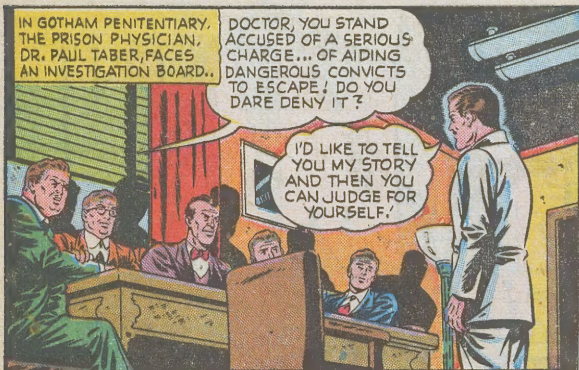
THIS CROAKER'S
A SAP IF HE THINKS
I REALLY GOT A
SPRAINED BACK!

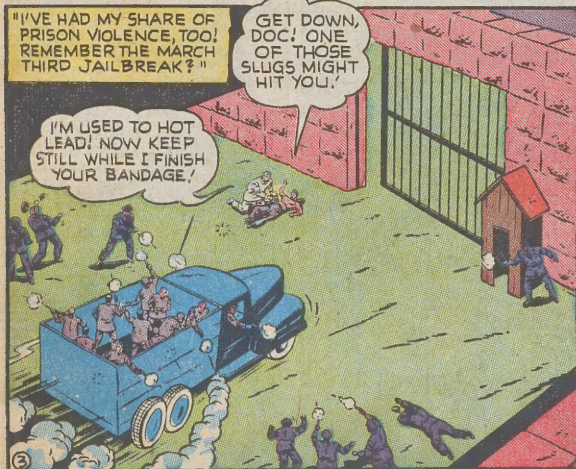
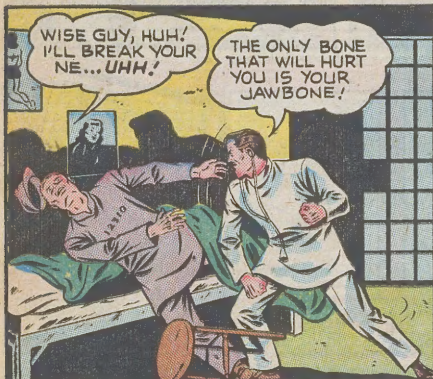
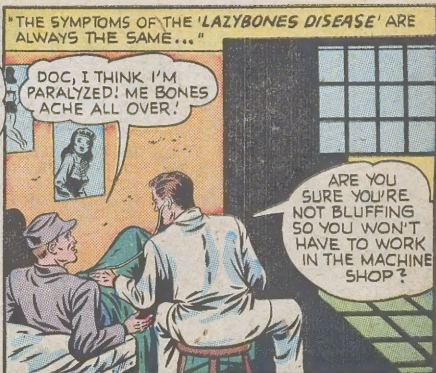
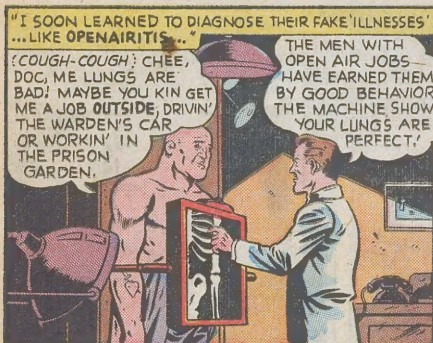
I'LL TELL HIM
I GOT A PHOBIA.
I CAN'T STAND
WALLS CLOSIN'
IN ON ME!



THIS IS THE STORY OF A
MAN WHO, THOUGH HE'S
NOT A CRIMINAL, GIVES UP
HIS FREEDOM TO LIVE BE-
HIND GRIM PRISON WALLS!
BATMAN AND ROBIN
CALL HIM A HERO OF THE
BIG HOUSE, BUT HE
DISAGREES, SAYING HE'S
ONLY A MAN WITH A JOB,
AND THAT JOB IS...

OR **The PRISON
DOCTOR!**







BATMAN



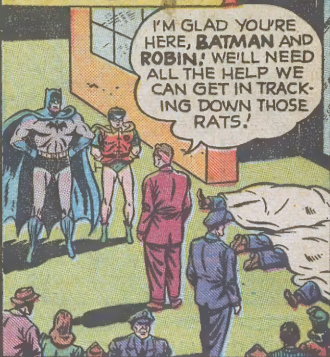
"NOW I WANT YOU TO THINK BACK TO LAST YEAR, AND THE \$483,000 HOLDUP OF THE WHEAT EXCHANGE BANK!"

WE'LL BLAST ANYBODY WHO TRIES TO STOP US.



"THE VIOLENCE OF THAT ROBBERY SHOCKED THE NATION..."

I'M GLAD YOU'RE HERE, **BATMAN** AND **ROBIN**! WE'LL NEED ALL THE HELP WE CAN GET IN TRACKING DOWN THOSE RATS!



"EYE-WITNESSES IDENTIFIED THE BANDITS FROM THEIR ROGUES' GALLERY PHOTO-GRAPHS."



JOHN "LIPPY" FABIAN
WANTED FOR
ARSON, SLAYING



ARTHUR "BOODLE" BENSON
WANTED FOR
PEDDLING HOT ICE



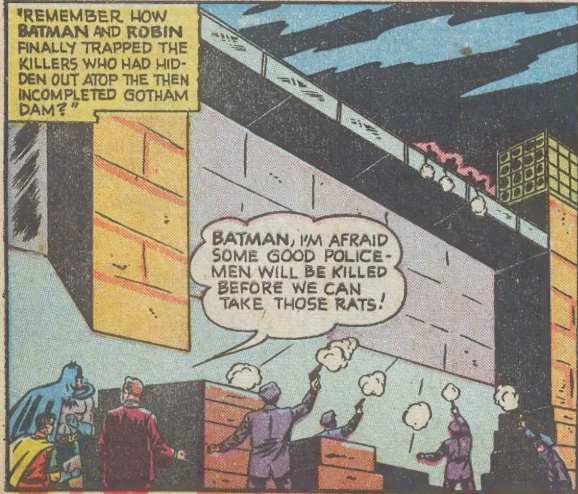
JEFF "NITRO" BLAKE
WANTED FOR MURDER
OF WAXEY WILLIAMS



NED "WEASEL" HARRIS
WANTED FOR
SMUGGLING RAP

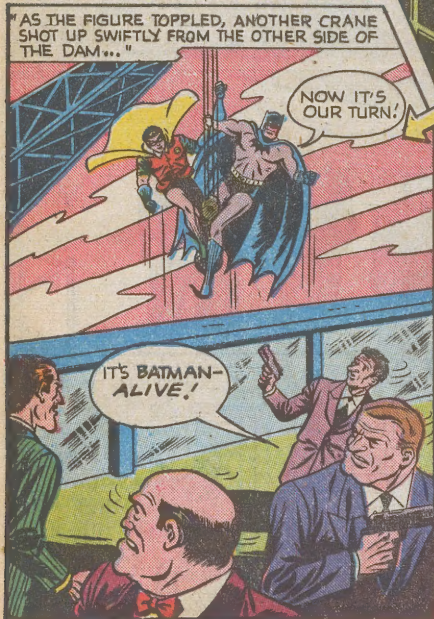
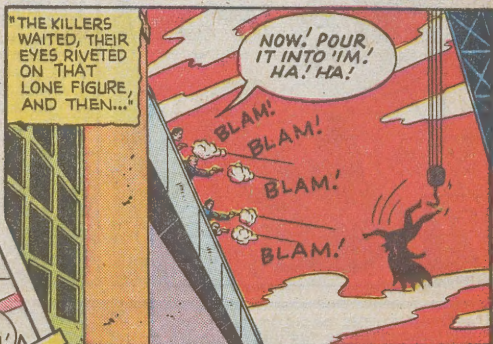
"REMEMBER HOW **BATMAN** AND **ROBIN** FINALLY TRAPPED THE KILLERS WHO HAD HIDDEN OUT ATOP THE THEN INCOMPLETED GOTHAM DAM?"

BATMAN, I'M AFRAID SOME GOOD POLICEMEN WILL BE KILLED BEFORE WE CAN TAKE THOSE RATS!



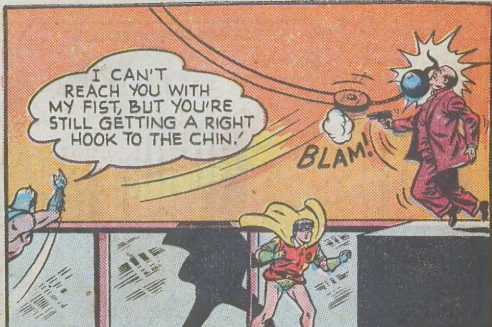
WAIT, CHIEF, I'VE GOT AN IDEA! IT'S RISKY, BUT IT'S WORTH TRYING! NOW LISTEN...



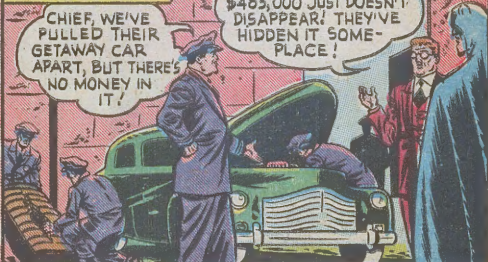


"THAT SURPRISE ATTACK WAS TIMED TO THE SECOND, AND BATMAN AND ROBIN MADE EVERY SECOND COUNT!"

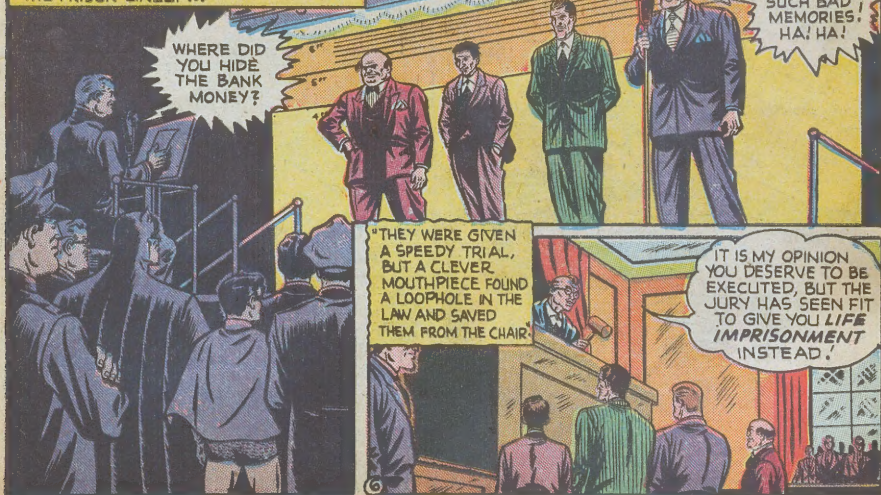
BEFORE YOU TAKE ME, THAT KID'S GONNA STOP LIVIN'!



"THE BANDITS WERE TAKEN INTO CUSTODY, BUT THEIR LOOT WAS MISSING..."



"AFTERWARD, THE DEFIANT GANG WAS QUESTIONED UNDER THE WHITE LIGHTS OF THE PRISON LINEUP..."



"IN PRISON, THEY DIDN'T BOTHER HIDING THEIR CONTEMPT FOR THE LAW!"

HEY, GUARD,
WANNA BET WE
CRASH OUTA
THIS ZOO?

SAVE
YOUR MONEY!
YOU'D
LOSE.

"ANOTHER TIME, THEY TRIED BOARDING THE COAL DELIVERY TRAIN, BUT THE FREIGHT ENTRANCE WAS ALWAYS WATCHED!"

COME OUT
WITH YOUR
HANDS UP.

"TWO DAYS LATER, THEY TRIED TO RUSH THE GUARDS DURING A MOVIE SHOW, BUT TEAR GAS STOPPED THEM."

(COUGH)

CAN'T BREATHE!
(COUGH)

"THEN ONE DAY THREE OF THEM MET IN THE PRISON LIBRARY..."

BOYS, THIS JUG IS CRASH-PROOF! BUT THERE'S ONE WAY OUT—THAT'S WITH A **BACK-DOOR PAROLE!**

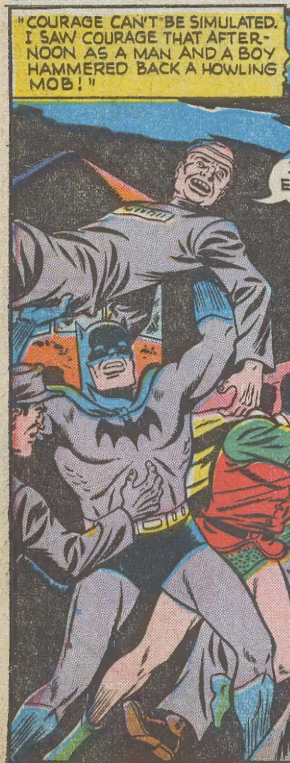
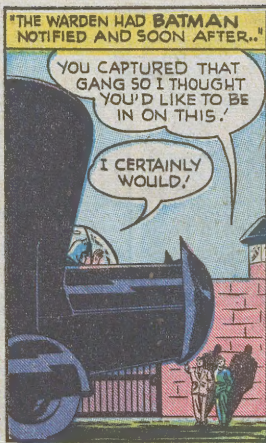
A 'BACK-
DOOR
PAROLE' IS
CONVICT
SLANG FOR
A
PRISON
DEATH
CERTIFICATE

"THE NEXT DAY,
IN THE PRISON
LAUNDRY..."

OKAY...
THE GUARD'S
LOOKIN' THE
OTHER
WAY!

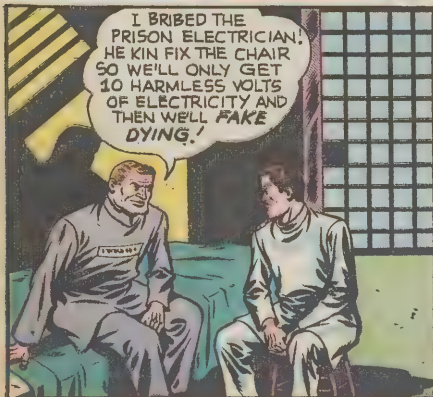
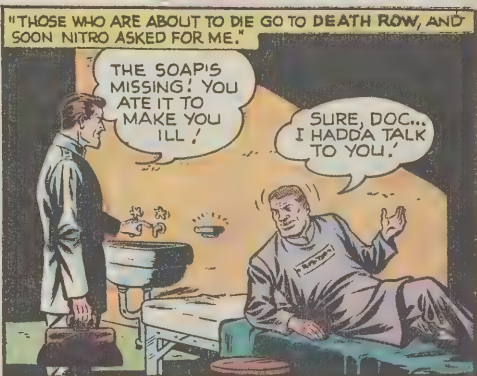
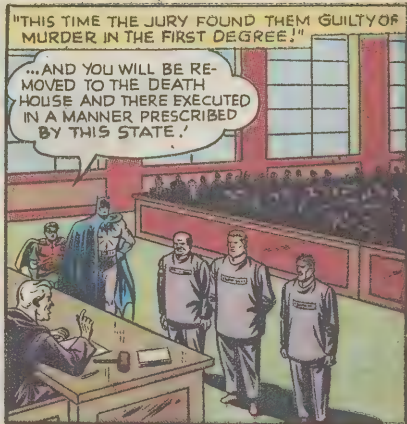
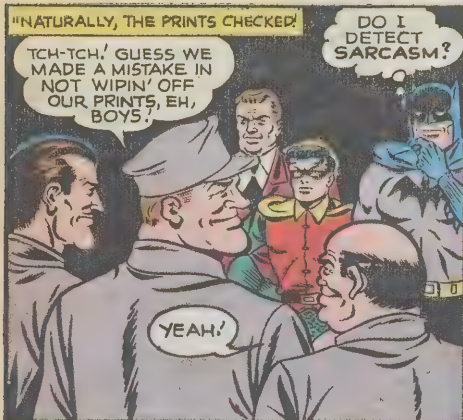
TOO BAD IT
HAD TO BE WEASEL,
BUT WE GOTTA
KILL SOMEBODY!

NO-
NO!





BATMAN



"NITRO SPOKE SOFTLY, PLAYING ON MY EMOTIONS..."

WHY WORK BEHIND PRISON WALLS... FOR SMALL CHANGE... WHERE HALF YOUR PATIENTS HATE YOU? DON'T BE A CHUMP.

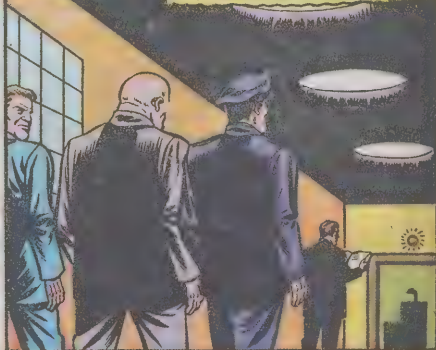
HMMM! OKAY... IT'S A DEAL!



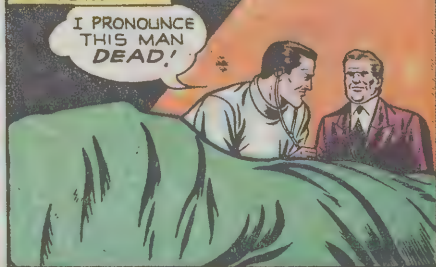
"THEY STRAPPED HIM IN... THE LIGHTS DIMMED..."



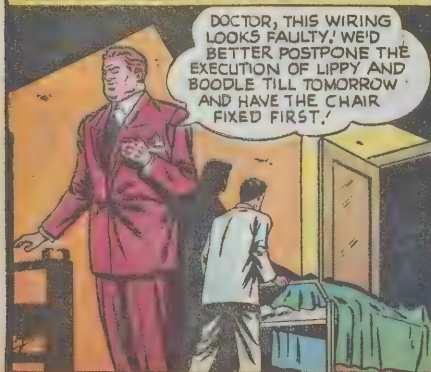
"THE NEXT NIGHT, NITRO WAS THE FIRST TO GO WALKING DOWN THE LONG NARROW CORRIDOR—THE LAST MILE."



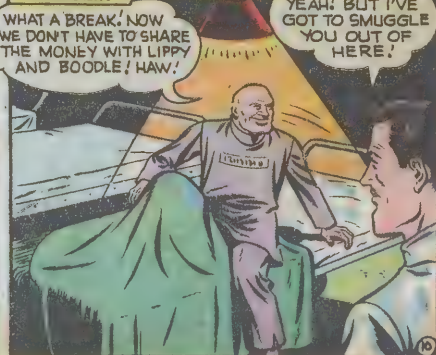
"THE LIGHTS WENT ON AGAIN, LIKE STAGE LIGHTS, AS I PLAYED MY PART AND SPOKE MY LINES..."



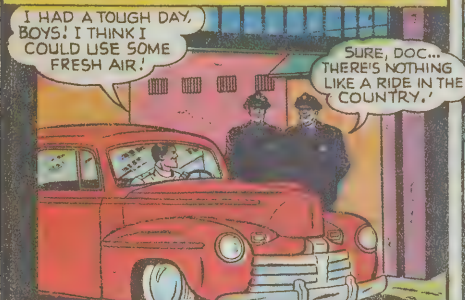
"THEN THE WARDEN STEPPED TO THE CHAIR..."



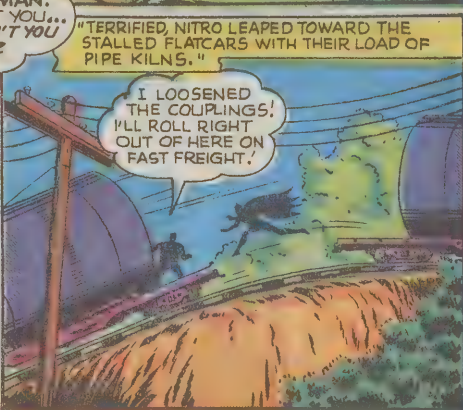
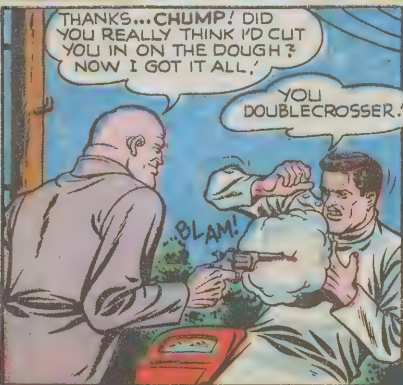
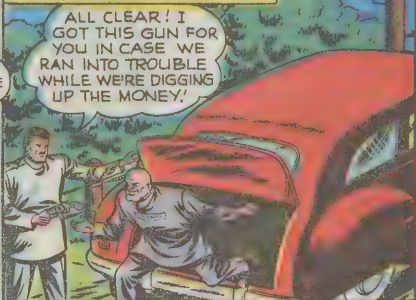
"I WHEELED NITRO INTO THE DESERTED PRISON MORGUE..."

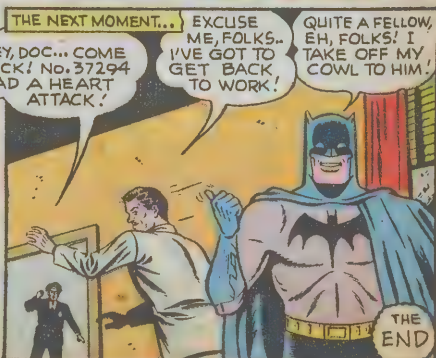
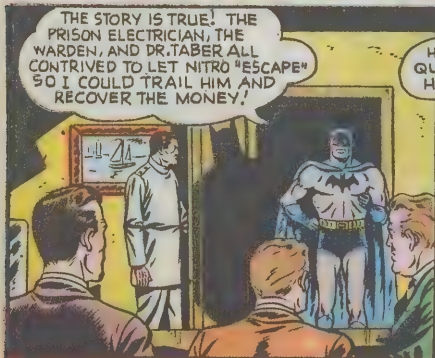
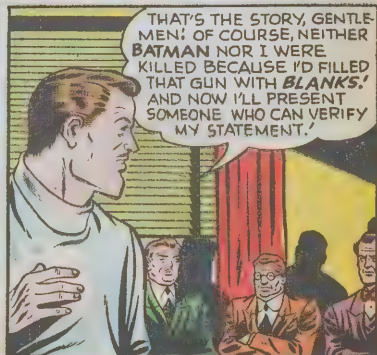
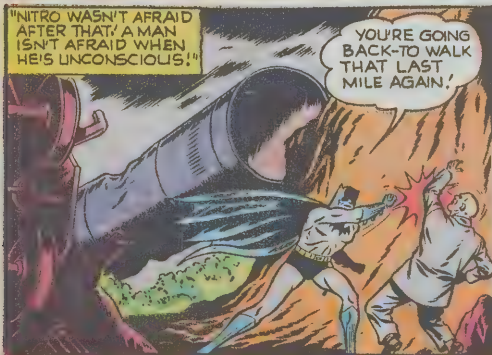
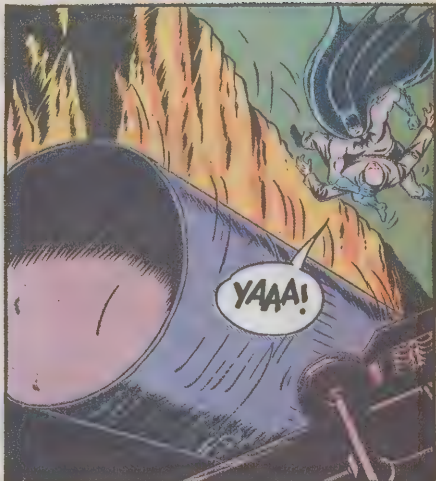
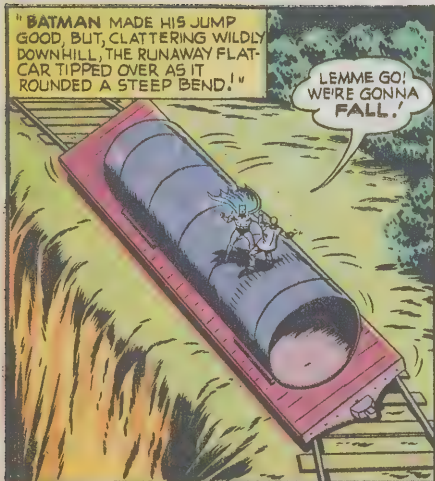


"SOON AFTER I DROVE MY CAR TO THE PRISON GATES."



"LATER, ON THE OPEN ROAD..."







MIZE HAS "PHOTO" EYE AT THE PLATE--SELDOM SWINGS AT A BAD PITCH. LAST SEASON JOHNNY "CLICKED" FOR 51 HOME RUNS--AN ALL-TIME NATIONAL LEAGUE RECORD FOR LEFT-HANDED BATTERS. HIS AMAZING HOME-RUN OUTPUT ALSO GAINED MIZE A TIE FOR LEAGUE HOME RUN TITLE.

Johnny **MIZE**

CHAMPION HOME RUN
HITTER OF THE
NEW YORK GIANTS

A REAL FENCE-BUSTER!
JOHNNY DROVE HOME 138 RUNS
LAST SEASON TO LEAD ALL NATIONAL
LEAGUE HITTERS IN RUNS BATTED IN.
FANCY FIELDER, TOO -- MIZE'S .996
PERCENTAGE WAS TOPS FOR LEAGUE
FIRST-BASEMEN.

"**R**eaching for that big orange and blue Wheaties package at the training table is almost automatic with me," says Johnny Mize, "those whole wheat flakes are swell-tasting with milk and fruit. Nourishing, too."

DO WHEATIES
**BREAKFAST
OF CHAMPIONS**

WITH MILK AND FRUIT



"Wheaties" and "Breakfast of Champions" are registered trade marks of General Mills, Inc.

MURDER ON
THE MOVIE SET

DETECTIVE SAM SPADE AND HIS SECRETARY EFFIE
VISIT A MOVIE SET JUST AS A WESTERN SHOOTING
SCENE IS TAKING PLACE

DASHIELL HAMMETT'S
**Adventures of
SAM SPADE**

LISTEN TO: "The Adventures of Sam Spade"
every Sunday evening on your Columbia (CBS)
station. See radio listing in your local newspaper.

HOW'D YOU
LIKE THAT
MR. SPADE?

GEE, SAM--THESE ACTORS
LOOK HANDSOME! BET THEY
USE WILDROOT CREAM-OIL
HAIR TONIC

HEY GUS!
COME HERE!

SWELL,
GUS! YOU'RE
A GREAT
DIRECTOR!

THIS
MAN'S BEEN
SHOT!

SAM--
LOOK
OUT!

... BUT THEY
USE BLANKS IN
THEIR GUNS!

IT'S WILD BILL
DECKER... HE'S
GONE MAD!

LET ME ON THAT HORSE,
COWBOY--THAT GUY'S SHOOTING
REAL BULLETS!

LUCKY I LEARNED TO ROPE
AT THAT DUDE RANCH LAST
SUMMER!

BETTER CALL THE
BOOBY-HATCH...
THIS GUY'S LOCO.

YEA--HE'S BEEN
BROODING EVER
SINCE WE TURNED
HIM DOWN FOR THE
LEAD IN THIS
PICTURE

I WAS AFRAID
YOU'D USE
YOUR GUN
ON THAT
POOR
FELLOW,
SAM!

YOU MEAN THIS
BULGE IN MY COAT?
THAT'S NO GUN
SWEETHEART--
THAT'S MY BOTTLE OF
WILDROOT CREAM-OIL!

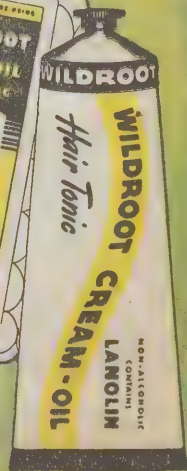
SAM SPADE ASKS:

CAN YOUR SCALP PASS THE
FINGERNAIL TEST?

TRY IT! SCRATCH YOUR HEAD. IF
YOU FIND SIGNS OF DRYNESS AND
LOOSE, UGLY DANDRUFF YOU NEED
WILDROOT CREAM-OIL HAIR TONIC.
NON-ALCOHOLIC--CONTAINS SOOTH-
ING LANOLIN

EFFIE SAYS:

SMART GIRLS USE WILDROOT CREAM-
OIL TOO! FOR QUICK GROOMING AND
FOR RELIEVING DRYNESS BETWEEN
PERMANENTS YOU CAN'T BEAT WILD-
ROOT CREAM-OIL! AND MOTHERS
FIND IT'S WONDERFUL FOR TRAIN-
ING CHILDREN'S HAIR





BATMAN



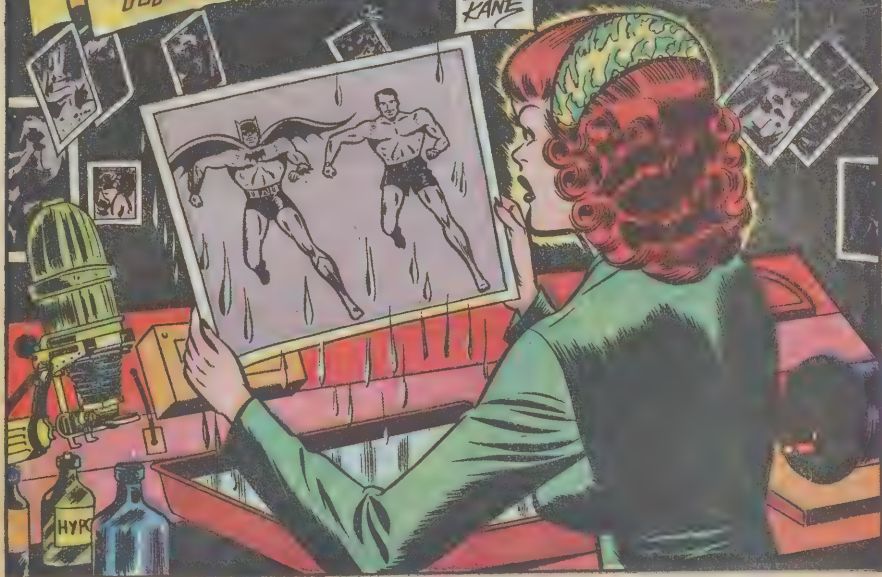
BATMAN

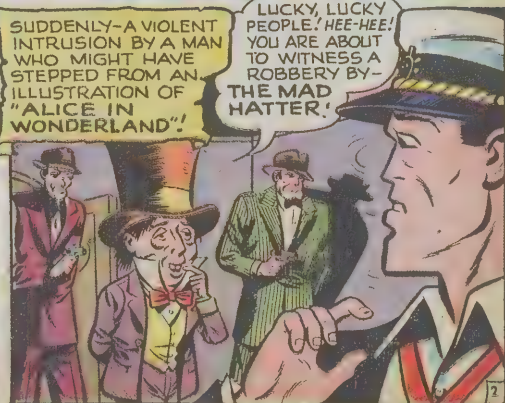
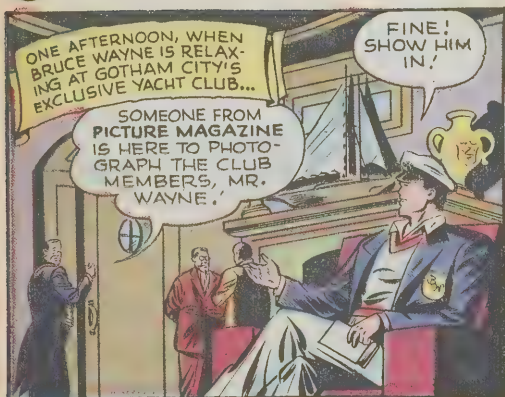
WITH
ROBIN
- THE BOY WONDER -

LIGHTS... ACTION... CAMERA!! LET'S FOCUS ON A NEW MENACE IN BATMAN'S LIFE! BUT THIS NEW "MENACE" IS A PRETTY ONE, FOR IT IS VICKI VALE... GIRL PHOTOGRAPHER! VICKI WILL CLIMB THE HIGHEST MOUNTAIN... SWIM THE DEEPEST SEAS... JUST TO GET A PICTURE! SO, YOU CAN IMAGINE TO WHAT LENGTHS SHE'LL GO TO GET A PICTURE PROVING **BRUCE WAYNE IS BATMAN!** GET SET TO VIEW A SERIES OF ACTION SNAPSHOTS AS **BATMAN** TRIES TO WALK OUT OF THE PICTURE THAT COULD WELL BE...

The Scoop of the Century!

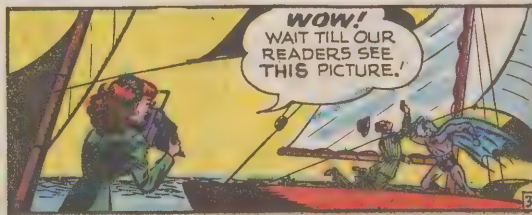
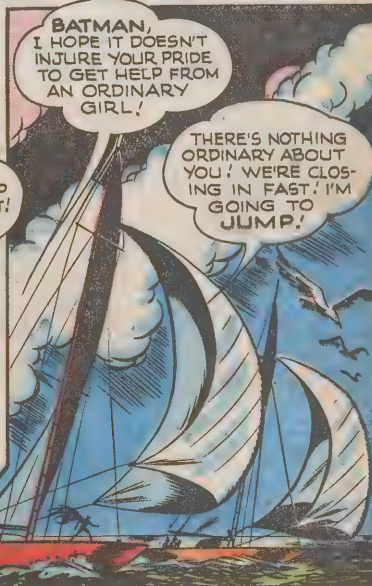
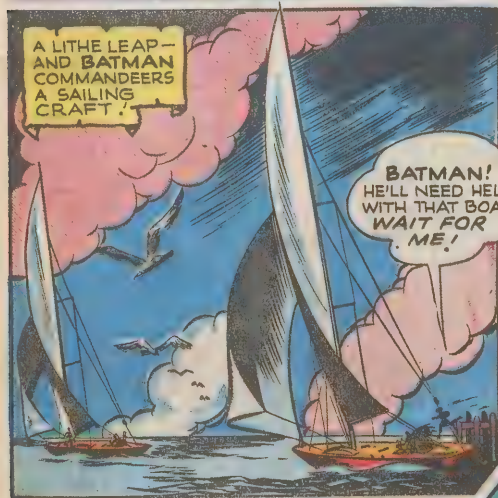
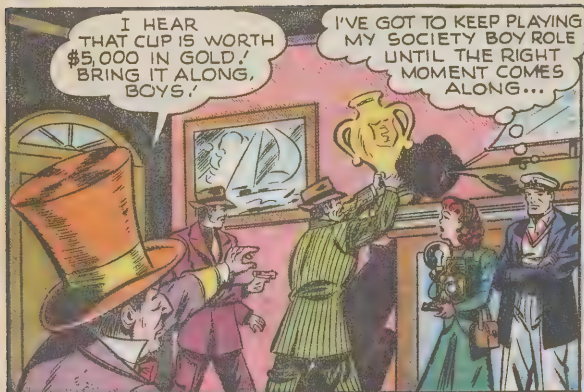
BOB KANE

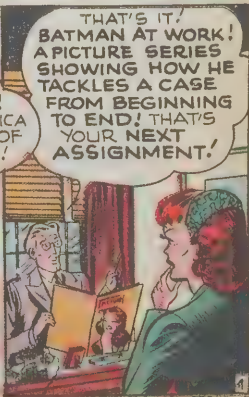
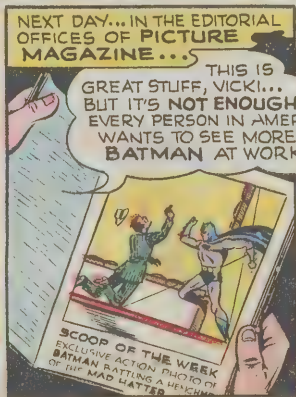
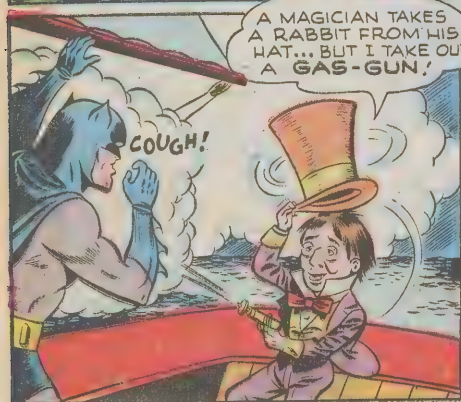
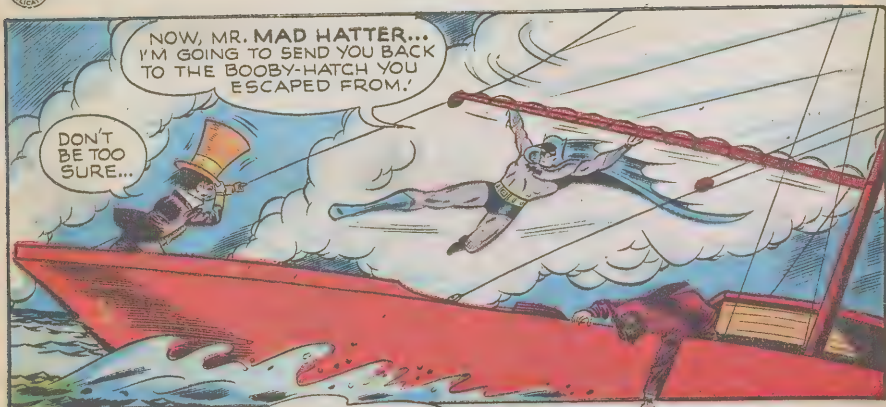






BATMAN







BATMAN



THAT NIGHT, VICKI DISCUSSES HER ASSIGNMENT WITH POLICE COMMISSIONER GORDON...

...SO I'D LIKE TO GET IN TOUCH WITH BATMAN!

YOU'RE LUCKY! I WAS JUST GOING TO SUMMON HIM! THAT CONCEITED MAD HATTER SENT THIS HAT HERE AS A CLUE TO HIS NEXT CRIME!

VICKI STARTS HER PICTURE SERIES BY PHOTOGRAPHING THE FAMED SKY SIGNAL THAT BEGINS A NEW CASE!

IN ANSWER TO THAT ASTRAL S.O.S. COME BATMAN AND ROBIN!

THIS MAD HATTER CHARACTER IS TRYING TO IMITATE THE JOKER AND THE PENGUIN BY SENDING A CLUE IN ADVANCE!

HOW CAN WE EVER TEACH THESE CRIMINALS THEY CAN'T WIN?

VICKI PROVIDES ONE WAY...

STOPPING CRIME BEFORE IT STARTS HAS ALWAYS BEEN MY HOPE! OKAY VICKI! YOU'RE NOW OUR OFFICIAL PHOTOGRAPHER!

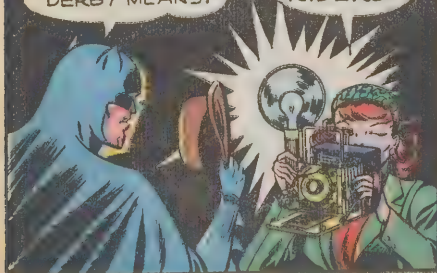
...AND ONCE A PERSON SEES PICTURES OF WHO HE'S UP AGAINST HE'LL HESITATE BEFORE TURNING TO A LIFE OF CRIME!

YOU CAN START BY PHOTOGRAPHING OUR FIRST CLUE—EVEN THOUGH I HAVEN'T FIGURED OUT WHAT THIS DERBY MEANS.

IF YOU WERE A WOMAN, YOU'D KNOW THAT TYPE OF DERBY IS WORN BY WOMEN HORSE RIDERS!

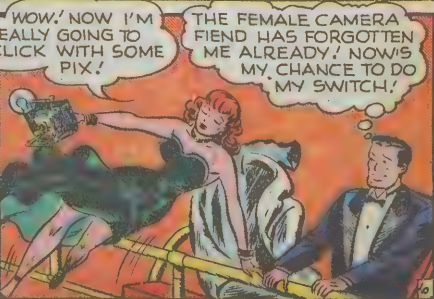
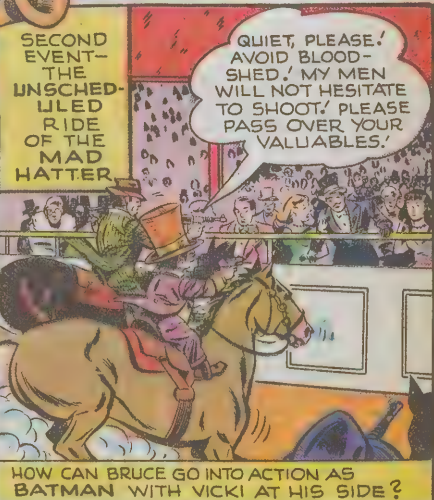
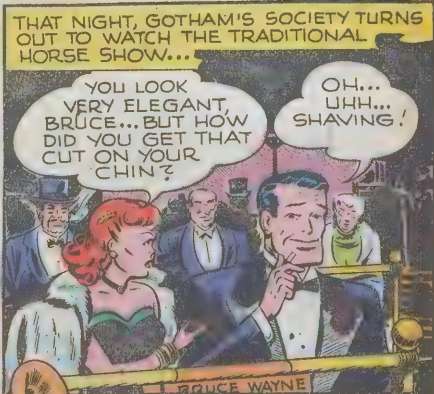
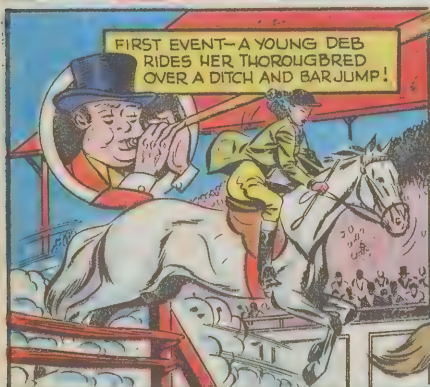
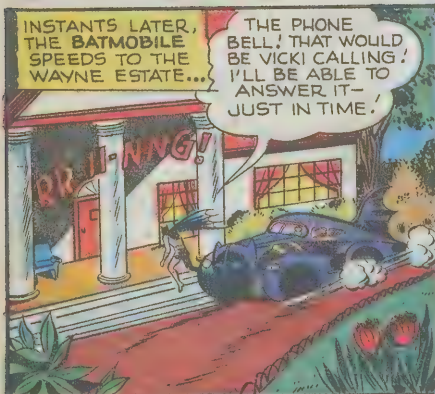
THE SOCIETY HORSE SHOW OPENS TONIGHT! ROBIN AND I CAN HIDE THERE SOMEPLACE, BUT HOW CAN YOU ARRANGE TO BE THERE?

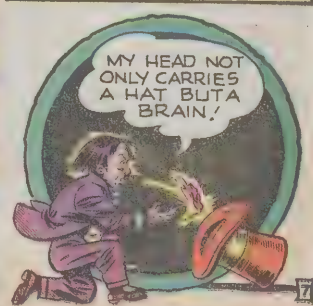
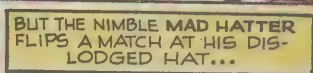
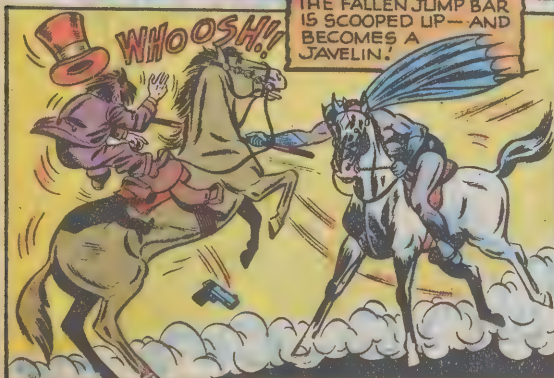
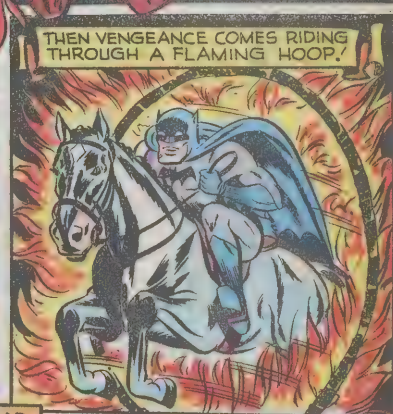
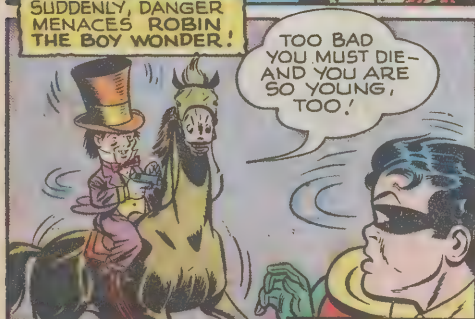
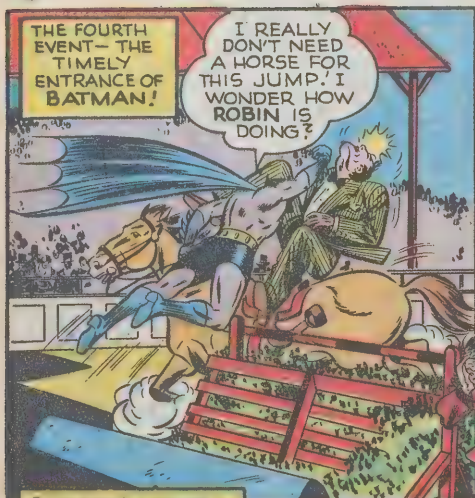
THAT'S EASY—I'LL ACCEPT A DATE WITH A SOCIAL BUTTERFLY NAMED BRUCE WAYNE! I'LL CALL HIM RIGHT NOW!

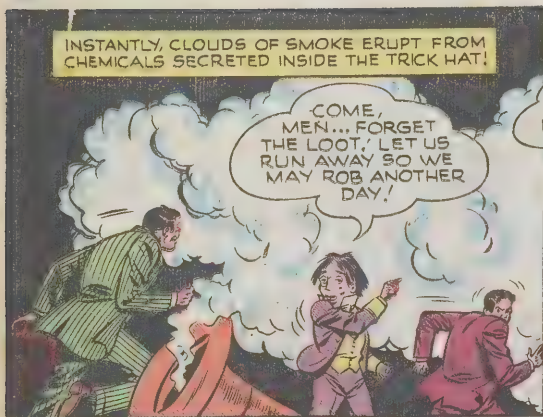




BATMAN

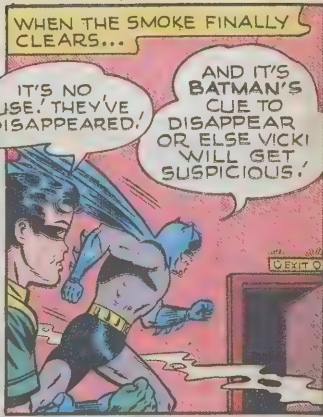






INSTANTLY, CLOUDS OF SMOKE ERUPT FROM CHEMICALS SECRETED INSIDE THE TRICK HAT!

COME, MEN... FORGET THE LOOT, LET US RUN AWAY SO WE MAY ROB ANOTHER DAY!



WHEN THE SMOKE FINALLY CLEARS...

IT'S NO USE, THEY'VE DISAPPEARED!

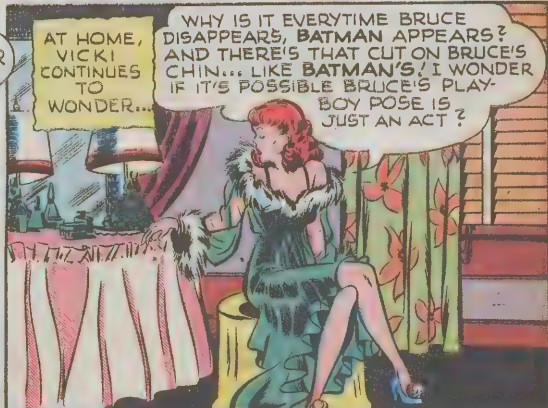
AND IT'S BATMAN'S CUE TO DISAPPEAR OR ELSE VICKI WILL GET SUSPICIOUS!



LATER...

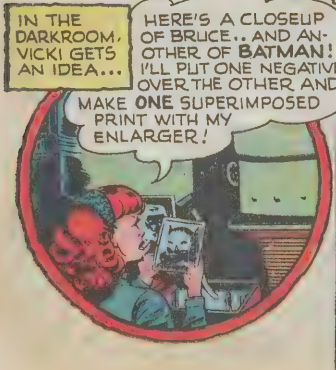
SORRY! I...UH... LEFT TO PHONE THE POLICE!

OH.. I SEE! I WAS BEGINNING TO WONDER WHAT HAPPENED TO YOU!



AT HOME, VICKI CONTINUES TO WONDER...

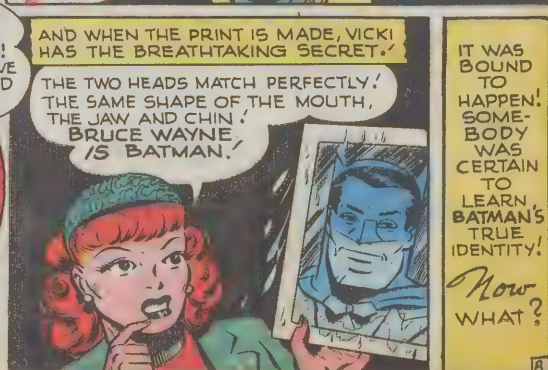
WHY IS IT EVERYTIME BRUCE DISAPPEARS, BATMAN APPEARS? AND THERE'S THAT CUT ON BRUCE'S CHIN... LIKE BATMAN'S, I WONDER IF IT'S POSSIBLE BRUCE'S PLAY-BOY POSE IS JUST AN ACT?



IN THE DARKROOM, VICKI GETS AN IDEA...

HERE'S A CLOSEUP OF BRUCE.. AND ANOTHER OF BATMAN! I'LL PUT ONE NEGATIVE OVER THE OTHER AND

MAKE ONE SUPERIMPOSED PRINT WITH MY ENLARGER!



AND WHEN THE PRINT IS MADE, VICKI HAS THE BREATHTAKING SECRET!

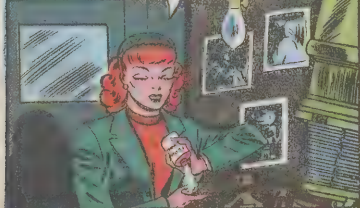
THE TWO HEADS MATCH PERFECTLY! THE SAME SHAPE OF THE MOUTH, THE JAW AND CHIN! BRUCE WAYNE IS BATMAN!

IT WAS BOUND TO HAPPEN! SOMEBODY WAS CERTAIN TO LEARN BATMAN'S TRUE IDENTITY!

Now WHAT?

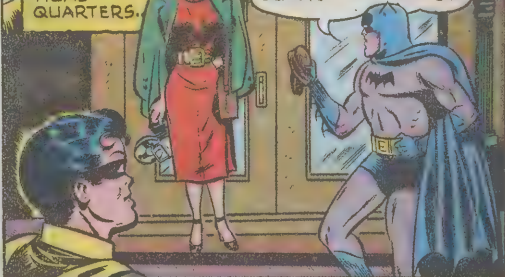
CARRYING OUT A PLAN, VICKI SPRINKLES A POWDER ON ONE HAND...

NOW, WITH THIS FLUORESCENT POWDER THAT SHINES ONLY IN THE DARK, I'LL PROVE BRUCE WAYNE IS BATMAN AND GET THE SCOOP OF THE CENTURY!



LATER... VICKI MEETS BATMAN AT POLICE HEAD-QUARTERS.

ANOTHER HAT CLUE FROM THE MAD HATTER! I'M TAKING IT TO THE BATCAVE FOR A CHEMICAL ANALYSIS. PERHAPS I CAN STOP A ROBBERY BEFORE IT STARTS.



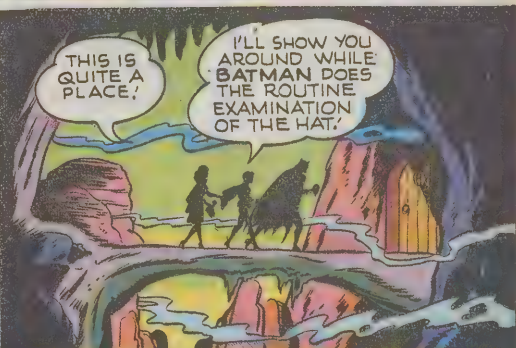
WHAT'S THE IDEA OF THE BLINDFOLD?

YOU'RE GOING TO HAVE A CHANCE TO PHOTOGRAPH THE BATCAVE, BUT ITS LOCATION MUST REMAIN A SECRET!



THIS IS QUITE A PLACE!

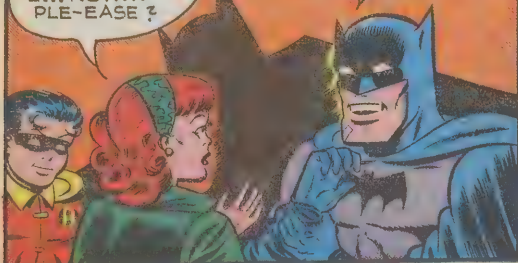
I'LL SHOW YOU AROUND WHILE BATMAN DOES THE ROUTINE EXAMINATION OF THE HAT!



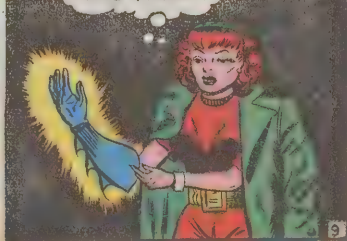
SOON, VICKI STANDS IN AWE INSIDE BATMAN'S UNDERGROUND SANCTUM!

ONE MOMENT, BATMAN! I'VE ALWAYS WANTED TO TRY ON ONE OF BATMAN'S GLOVES! COULD I... NOW... PLEASE?

YOU WOMEN THINK OF THE CRAZIEST TIME TO DO THINGS! HERE... HAVE YOUR FUN!

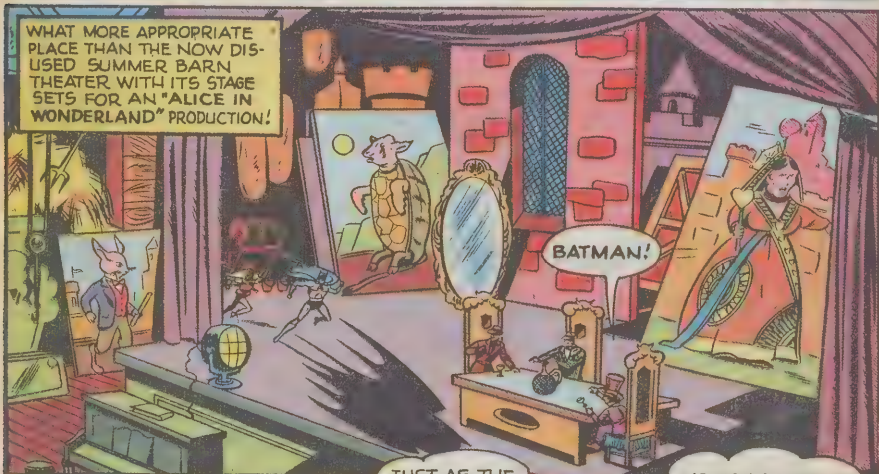
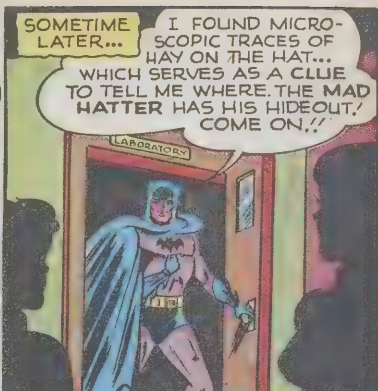
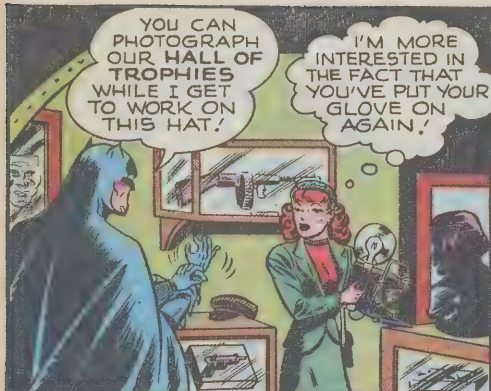


THERE! THE POWDER FROM MY HAND IS NOW TRANSFERRED INSIDE THE GLOVE! WHEN BATMAN PUTS ON THE GLOVE AGAIN, HE'LL GET THE POWDER ON HIS HAND!

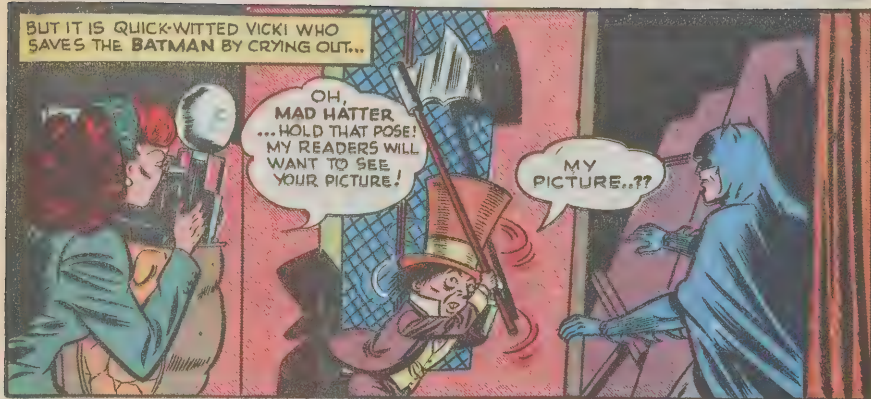




BATMAN



BUT IT IS QUICK-WITTED VICKI WHO SAVES THE BATMAN BY CRYING OUT...

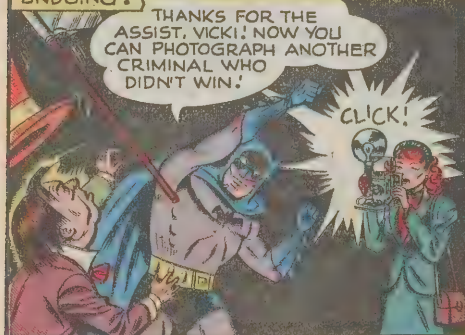


OH, MAD HATTER... HOLD THAT POSE! MY READERS WILL WANT TO SEE YOUR PICTURE!

MY PICTURE..??

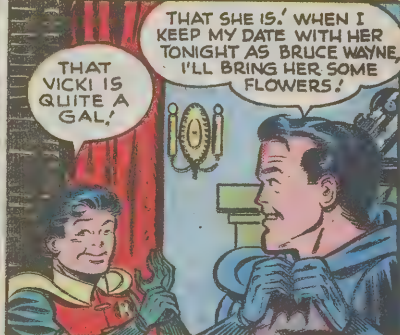
THE VAIN CRIMINAL INSTINCTIVELY TURNS HIS HEAD FOR THAT INSTANT-AND THAT IS HIS UNDOING!

LATER... AS VICKI HURRIES TO HER MAGAZINE WITH HER SCOOP PICTURES...



THANKS FOR THE ASSIST, VICKI! NOW YOU CAN PHOTOGRAPH ANOTHER CRIMINAL WHO DIDN'T WIN!

CLICK!



THAT VICKI IS QUITE A GAL!

THAT SHE IS! WHEN I KEEP MY DATE WITH HER TONIGHT AS BRUCE WAYNE, I'LL BRING HER SOME FLOWERS!



LATER...

FLOWERS FOR A FAIR LADY!

OH, HOW NICE! I'LL PUT THEM IN THAT VASE!



ABRUPTLY VICKI TURNS OFF THE LIGHT SWITCH-AND THE ROOM IS PLUNGED INTO DARKNESS!

HMM-M! HOW COZY!

DON'T GET SMUG; I JUST WANT TO SEE YOUR RIGHT HAND! IT GLOWS!

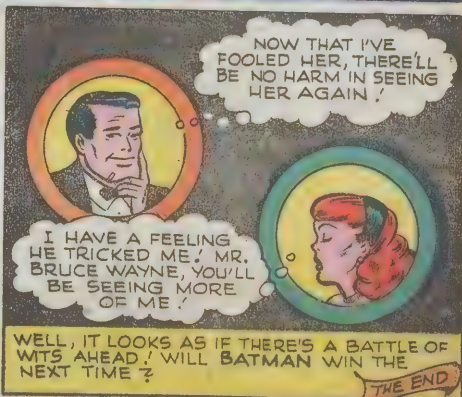
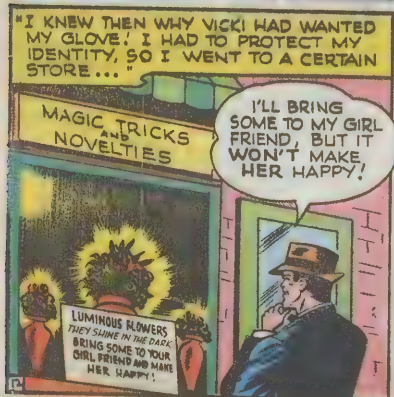
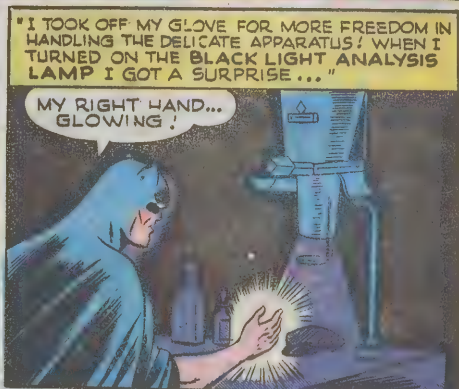
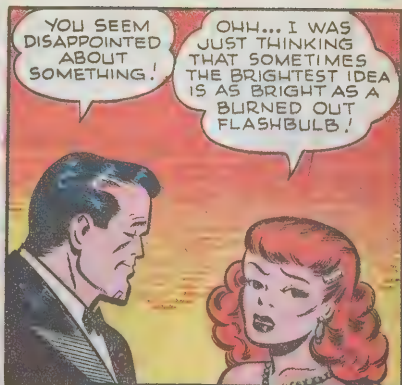
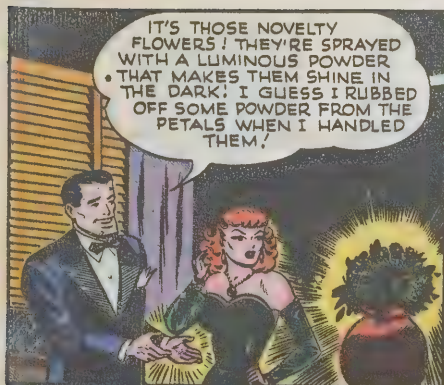


OH, THAT? I GUESS MY LEFT HAND GLOWS, TOO!

BUT... HOW... I DON'T UNDERSTAND..??



BATMAN



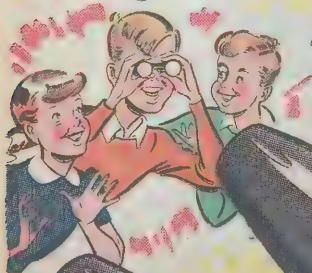
That remains to be seen! Meanwhile, follow the Daring Duo in DETECTIVE COMICS and WORLD'S FINEST COMICS!

Boys! Girls! Everyone!
Amazing New "P-82"

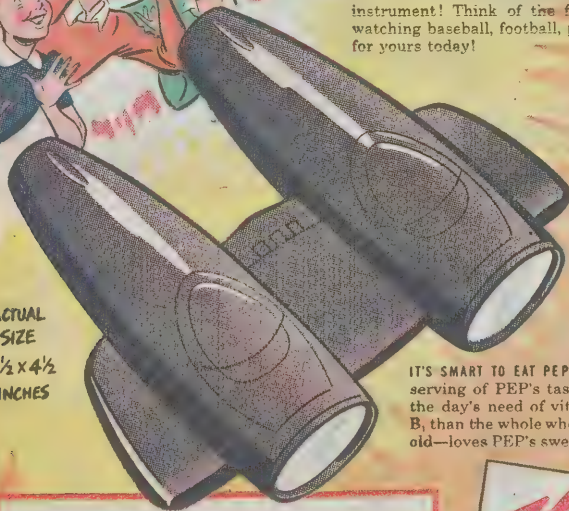
BINOCULARS!

Not just a toy! Precision-molded! 3-Power lenses!

HEY, KIDS! Get this pair of real 3-power field glasses shaped like the famous U. S. Air Force "Twin Mustang" Fighter—the "P-82"! NOT JUST A TOY! Precision-molded optical instrument! Think of the fun you can have with them—watching baseball, football, planes, birds, etc.! Hurry, send for yours today!



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SIZE
 $3\frac{1}{2} \times 4\frac{1}{2}$
INCHES



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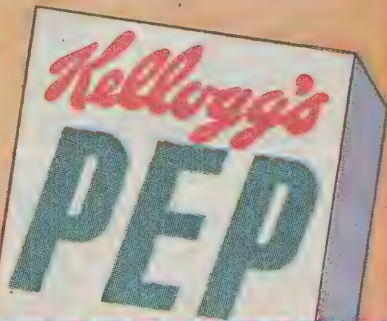
IT'S SMART TO EAT PEP! Did you know a single 1-oz. serving of PEP's tasty whole-wheat flakes supplies the day's need of vitamin D... plus more vitamin B, than the whole wheat itself! Everyone—young and old—loves PEP's swell flavor, too! Get hep! Eat PEP!



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BRING THINGS THREE TIMES CLOSER!



Upper left, "P-82" fighter plane seen with the naked eye.
Above, same plane seen with PEP's "P-82" BINOCULARS!



PLEASE SEND ME my "P-82" BINOCULARS! I enclose one Kellogg's PEP box top (end marked "top") and 25¢ for each pair of binoculars.

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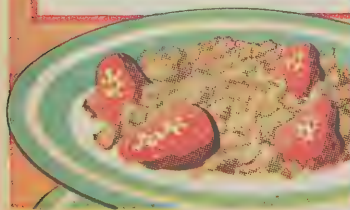
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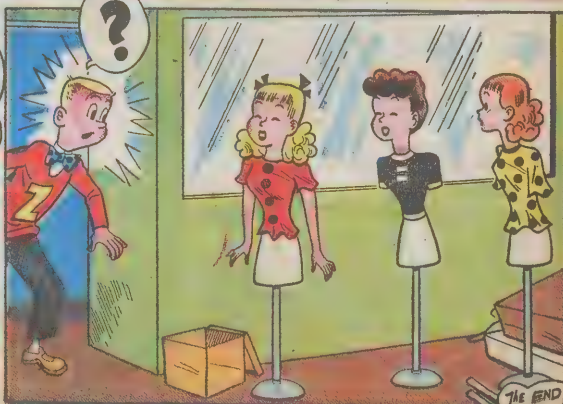
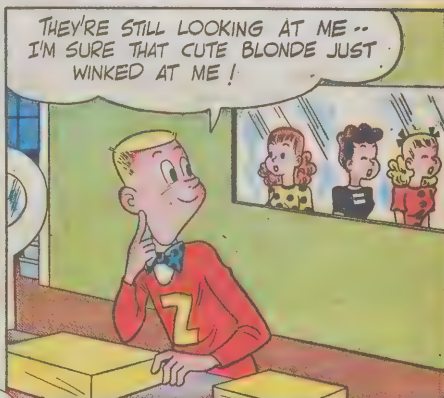
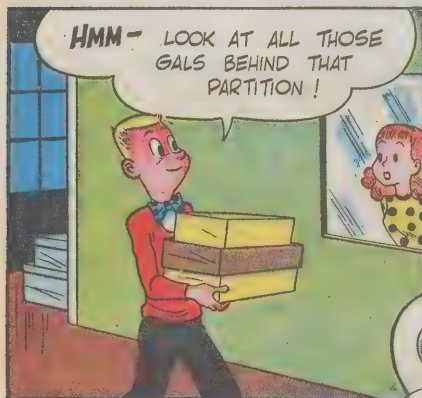




JERRY

THE JITTERBUG

JERRY BOSTOFF



THE UNKNOWN RAYS

THE MYSTERIOUS KEY

"**H**ERE are my snapshots," said Professor Roentgen. "I take pictures while I walk along. How do you like them?"

"Very good," replied his friend. "Here is a nice one of the river, and this oak tree is a fine picture. But this—" Suddenly the friend laughed. "What is this picture of a key doing right across a sunny meadow scene?"

"Ah, the key picture—" Professor Roentgen nodded. "I have wondered myself. I never took a picture of a key. I left the photographic plate in the laboratory overnight though. I wonder if I might find the answer to this mysterious key there. . . ."

The professor and his friend made their way to the laboratory.

"Now where could I look for this key which has forced its picture over my meadow scene?" the professor asked himself.

He and his friend made a thorough search of the lab, found bunches of keys, but not the one long key they were looking for.

Suddenly, Professor Roentgen exclaimed, "Here it is, my bothersome key! It was hidden in the book which I placed over my photographic plates."

"But how did the picture of the key get on the meadow picture—which was protected from the light," asked the friend.

"That I do not know, since you cannot take pictures without light," said Professor Roentgen.

This incident took place in 1895 when Roentgen began his experiments to determine how the mysterious key came to be photographed *through* the pages of a book—and without light.

Roentgen made a startling discovery.

Some of the vacuum tubes in his laboratory had given off strange rays. These rays had gone right through the book, and through the cover of the photographic plate. *But they had not gone through the key, which had therefore cast a shadow.*

What kind of rays were they, then? No one had ever heard of them before; no one knew what they were. Professor Roentgen called them X-rays. As scientists know, "X" stands for "unknown." These unknown rays were soon to become world famous.

KILL AND CURE

X-rays were dangerous because they could go through things. If you stay out in the sunlight too long, you'll get a burn, but the burn will be on the surface, because ordinary light doesn't go through your body. But when X-rays burn, they burn *inside*. So scientists who experimented with them without being careful, began to suffer in different ways, and some of them died. The others quickly learned that the only way to be safe was to be protected by plenty of lead shields.

They learned too that the same great power that made X-rays kill could also make them cure. Suppose a man had a cancer on the inside of his body, or microbes setting up an infection inside. X-rays could be used to burn out the diseased tissue. True, it sometimes burned out healthy tissue as well. But as doctors learned more and more about the rays, they also learned how to control the strength of the rays, and make them do more and more what they wanted.

So today, X-ray treatments are pretty safe. And when a dentist takes an X-ray of your teeth, or a doctor of your lungs, you're in no danger at all. Even if something goes wrong, the only result is a spoiled picture, and you have to pose again, without harm to yourself. Since 1895 we have made discoveries that Roentgen never dreamed of.

SEEING INSIDE THINGS

Other scientists began to work with X-rays. They learned that X-rays were really a form of light. Light will go through some solid things, like glass, plastic, and so on. X-rays go through wood, flesh, and paper in the same way that light goes through glass.

But, as Roentgen found, they don't go well through the iron of a key. And they have a lot of trouble going through lead. So, to cut off X-rays, scientists began to use lead shields in their laboratories.

Another thing they soon learned was that X-rays wouldn't go very well through bone. When they took X-ray photos of a hand wearing a ring, the flesh was as transparent as glass. All that resulted was a shadow-picture of a skeleton hand, wearing a ring loosely around one of the bony fingers.

Naturally, doctors were greatly interested in these pictures. When a man broke his leg, an X-ray picture showed them exactly where the bone was broken, and they could help the leg heal. Did a baby swallow a dime? X-rays showed in what part of the baby's stomach the dime was caught, and told doctors whether or not they should operate, and where. With X-rays, doctors could see right into the human body, instead of having to guess at a lot of things that were going on.

Later, X-rays were used to see into other things too. An inspector could look right into a steel rail, and tell if there was a dangerous crack, that might later lead to a train accident. It was possible to see into everything from a piano to an elephant, without opening it up.

X-rays were no longer a toy; they were useful. But at the same time, they were dangerous. Doctors began to learn how X-rays could hurt and kill.

LOOKING INTO THE MOLECULES

If you put a piece of paper under a microscope, and magnify it more and more,

you soon come to a point where no more magnification is possible. Everything becomes blurred. You'll see fibers of the paper, specks of dust, even microbes—but when you want to look *into* the microbes, you have trouble. Chemists know that molecules exist, but no microscope can magnify a molecule enough to let you look into one.

But X-rays can. X-rays, you will remember, are a very unusual form of light. With them scientists have learned how to look into the insides of molecules, to tell which atom they see, and to decide how the atoms are arranged!

Now this may seem to you unimportant. All right, a scientist may be interested to know about the atoms—but what earthly use is the knowledge?

Well, for one thing, if scientists know how a molecule looks—they can make it. For a long time, they were baffled by the molecules of rubber and cotton. Now that X-rays have revealed some of the secrets of these two materials, it is possible to make rubber better than ever, to make *new* kinds of rubber, to make cotton stronger, to turn cotton into different fabrics, and so on. X-rays reveal to scientists how the atoms of steel and other alloys are put together. So now we can make forms of steel that are strong, don't rust, and do all sorts of things steel could never before do.

Another use for X-ray pictures of molecules is to help identify unknown chemicals. Chemists have set up a sort of *Rogues' Gallery* of chemicals, in which each one is identified by its X-ray picture. So when a chemist finds an unknown chemical in an apple, or in soil, he takes an X-ray picture, and tries to match it against the one in the *Rogues' Gallery*, in order to identify it!

That key that Roentgen discovered was one of the most important ever found. It not only led to one of the greatest discoveries of modern science, but also unlocked the door to secrets of nature no one had dreamed of solving.

William Morrison

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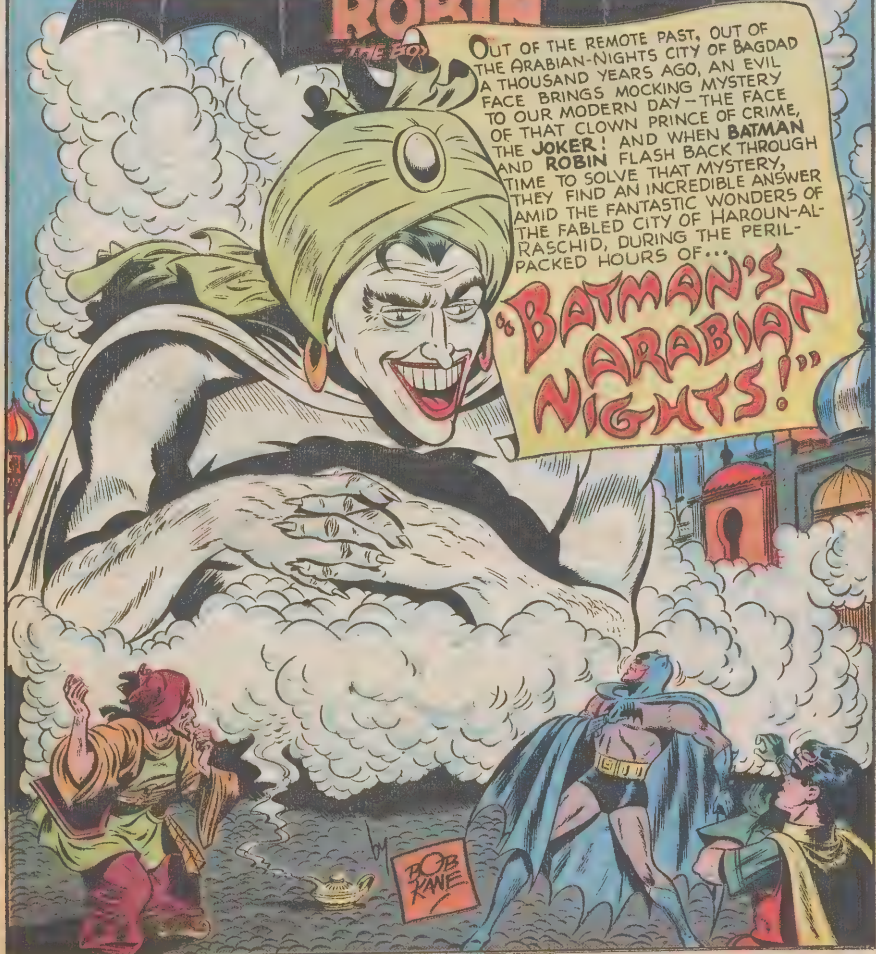
BATMAN

WITH
ROBIN

THE BOY

OUT OF THE REMOTE PAST, OUT OF THE ARABIAN-NIGHTS CITY OF BAGDAD A THOUSAND YEARS AGO, AN EVIL FACE BRINGS MOCKING MYSTERY TO OUR MODERN DAY - THE FACE OF THAT CLOWN PRINCE OF CRIME, THE JOKER! AND WHEN **BATMAN** AND **ROBIN** FLASH BACK THROUGH TIME TO SOLVE THAT MYSTERY, THEY FIND AN INCREDIBLE ANSWER AMID THE FANTASTIC WONDERS OF THE FABLED CITY OF HAROUN-AL-RASCHID, DURING THE PERIL-PAKED HOURS OF...

"BATMAN'S ARABIAN NIGHTS!"



SOCIALITE BRUCE WAYNE AND HIS YOUNG WARD DICK GRAYSON ATTEND AN ORIENTAL RUG-AUCTION...

AND NOW, LADIES AND GENTLEMEN, AN ANTIQUE ARABIAN RUG FROM ANCIENT BAGDAD.

I HAVEN'T SEEN ANYTHING I'D WANT TO BUY, DICK. WE MAY AS WELL GO.

SUDDENLY-A FANTASTIC SURPRISE!

THE RUG IS BADLY WORN, ESPECIALLY THE LOWER HALF, BUT IT'S A RARE, GENUINE ANTIQUE OF A THOUSAND YEARS AGO.

BRUCE, DO YOU SEE WHAT I SEE? THAT'S THE JOKER'S FACE ON THE RUG!

SOON, AFTER A SUCCESSFUL BID FOR THE RUG...

HOW COULD THE JOKER'S FACE GET ON A RUG A THOUSAND YEARS OLD?

IT'S A FASCINATING MYSTERY! AND THERE'S ONE WAY TO SOLVE IT- PROF. NICHOLS CAN SEND US BACK TO ANCIENT BAGDAD.

A HURTLING RUSH THROUGH THE CENTURIES, AND THEN SUDDENLY-

LATER, PROFESSOR NICHOLS ONCE AGAIN WIELDS HIS HYPNOTIC POWERS OF HIS TIME-SCIENCE!

GO BACK TO BAGDAD A THOUSAND YEARS AGO - BACK-

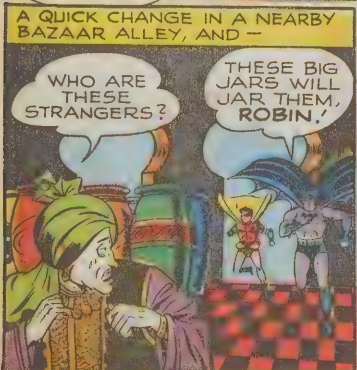
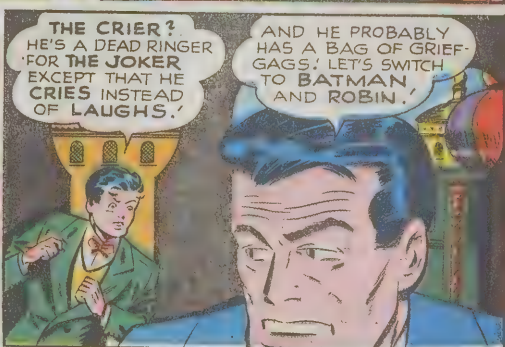
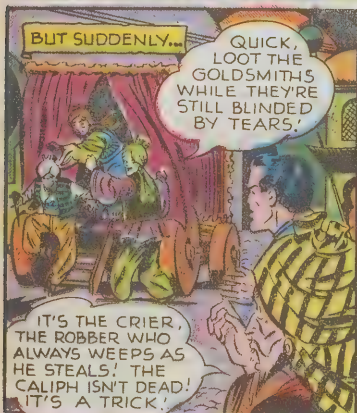
THE BAGDAD OF THE BAZAAR OF THE ARABIAN NIGHTS. WE'RE THERE!

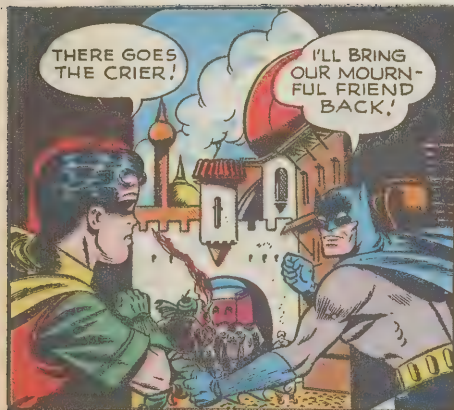
THIS MUST BE THE BAZAAR OF THE GOLDSMITHS! WE'LL FIND THE RUG BAZAAR AND ASK ABOUT THAT JOKER RUG.

SUDDENLY, CRIES OF WOE ECHO THROUGH THE STREETS...

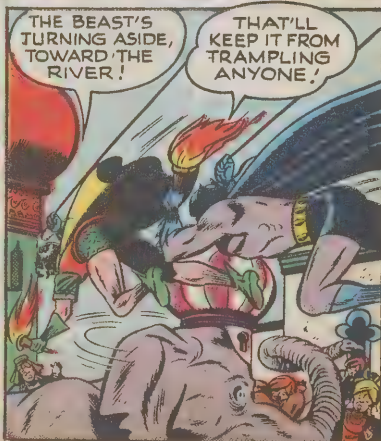
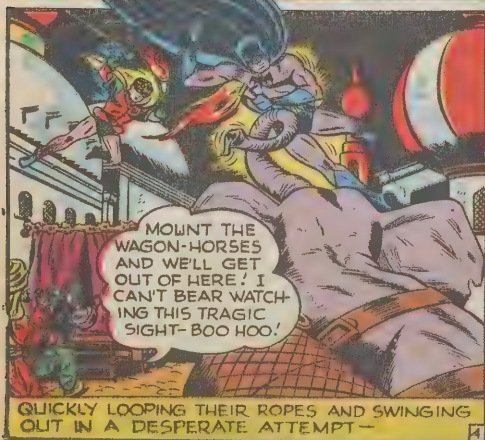
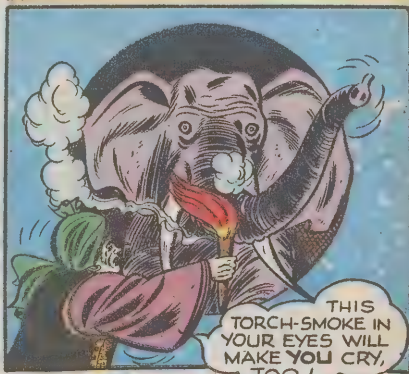
WHAT'S WRONG? WHAT'S ALL THAT SHOUTING ABOUT?

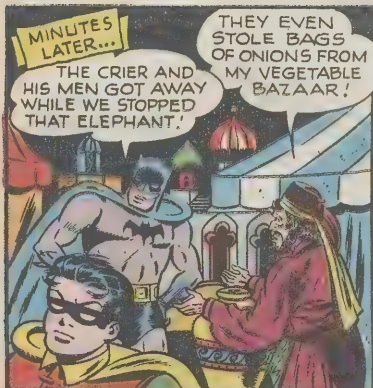
THE CALIPH HAS BEEN KILLED! OUR BELOVED CALIPH IS DEAD!





BUT THE TEARFUL THIEF HAS A PLAN —

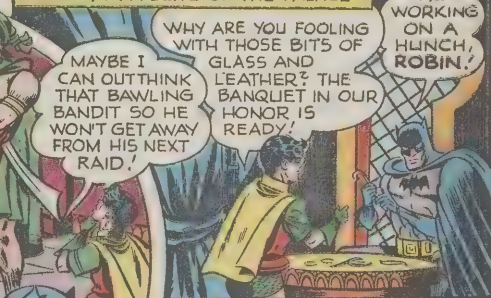




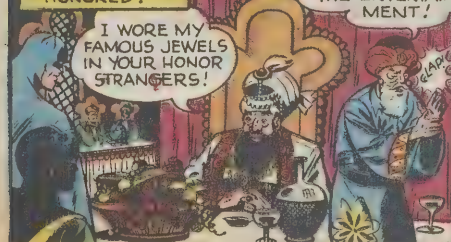
SOON, IN THE CALIPH'S PALACE...



LATER, IN A SUITE OF THE PALACE -



IN THE GREAT BANQUET HALL OF HAROUN-AL-RASCHID, THE TWO STRANGERS FROM ACROSS TIME ARE HONORED!



SUDDENLY, THE MAGICIANS CAST OFF DISGUISES AND PRODUCE PRIMITIVE BELLOW'S SPRAY-GUNS —

THAT'S THE CRIER — AND THEY'RE SPRAYING ONION JUICE TO BLIND EVERYONE WITH TEARS!

BOO HOO! I FEEL LIKE WEeping, TOO! WE'D BETTER PUT ON OUR LENSES, MEN!

GET THE CALIPH'S JEWELS WHILE THEY'RE ALL BLINDED!

BUT THERE ARE TWO WHO ARE NOT BLINDED.

I GUESSED THE TRICK WHEN THEY STOLE THOSE ONIONS, AND MADE THESE GOGGLES TO BE READY FOR IT. HERE'S A PAIR FOR YOU, TOO, ROBIN.

THIS ISN'T MAGIC, BUT IT'S A GOOD TRICK.

LOOK OUT BEHIND YOU, ROBIN!

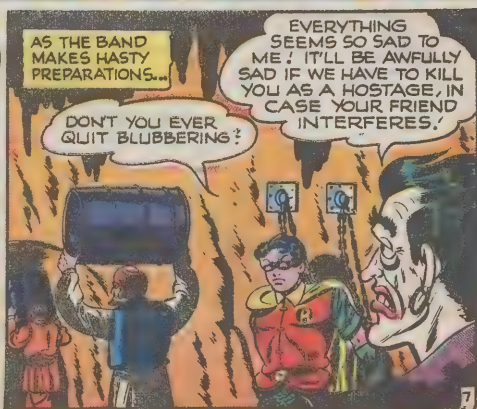
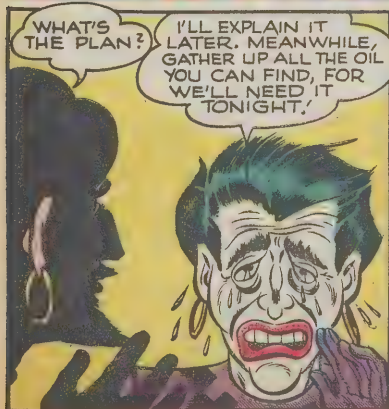
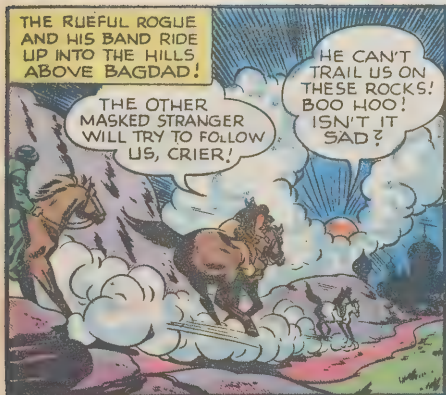
BUT BEFORE ROBIN CAN TURN...

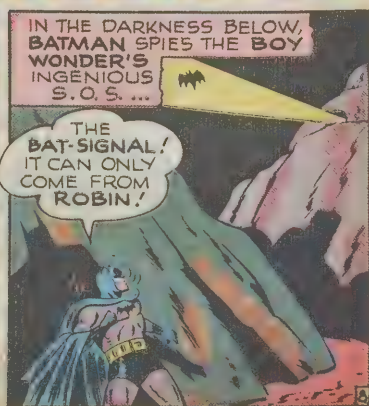
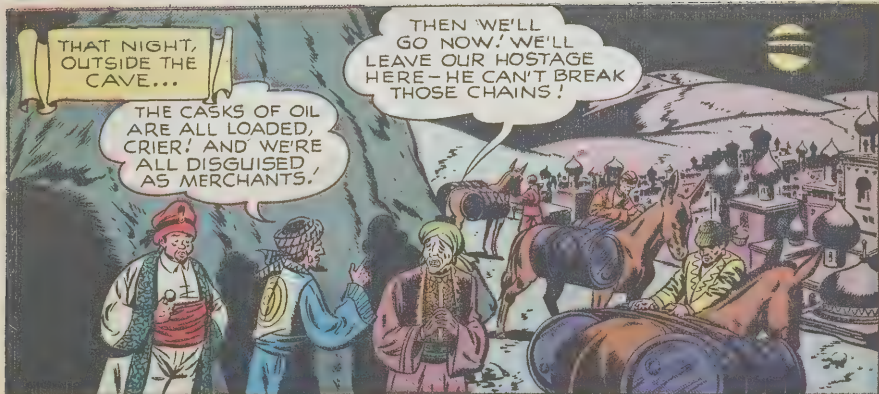
BOO HOO! I'LL HAVE TO KILL THIS POOR LAD UNLESS YOU LET ME AND MY MEN GO!

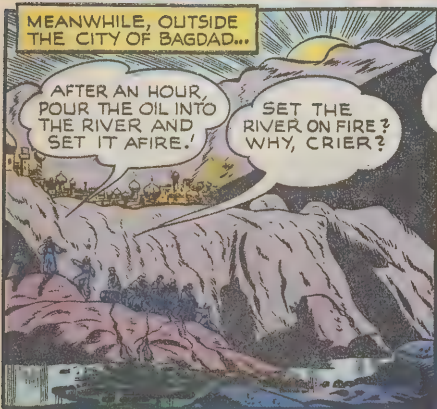
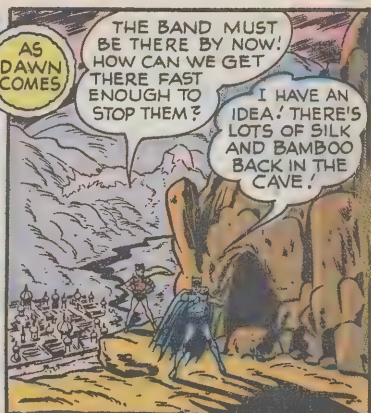
I'LL HAVE TO DO IT, FOR ROBIN'S SAKE!

AND THE BOY WONDER IS SPIRITED AWAY BY THE CRIER'S BAND...

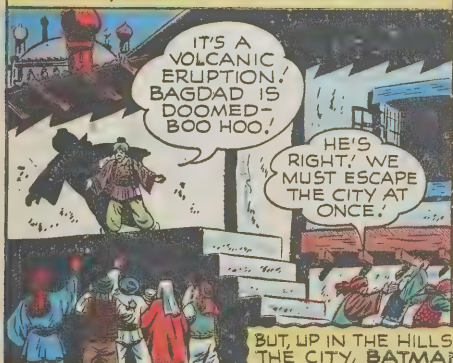
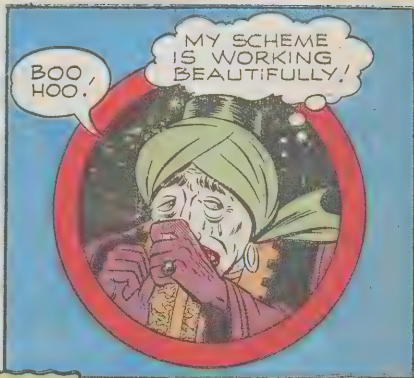
QUICK, BACK TO OUR LAIR!



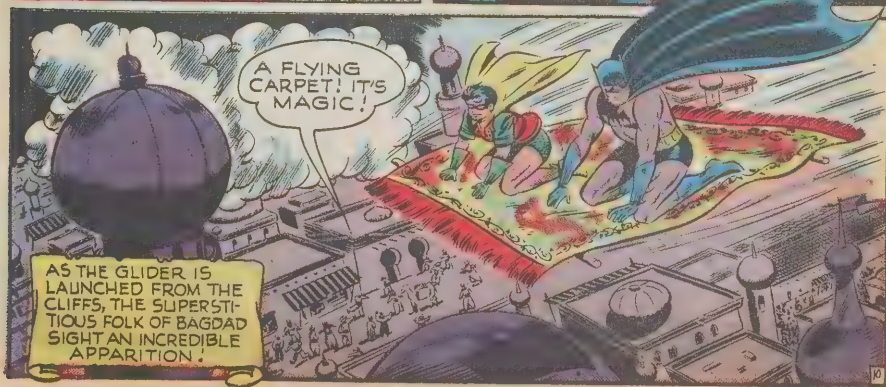




AND ONCE AGAIN THE WILY CRIER, IN A NEW DISGUISE, WEEPS SO THAT HE CAN REAP...

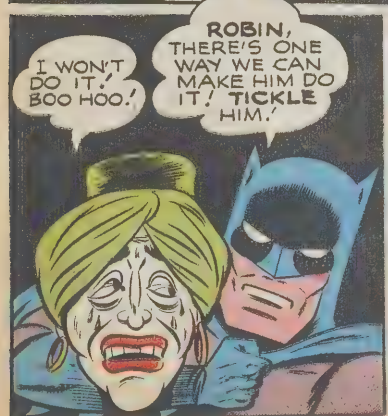
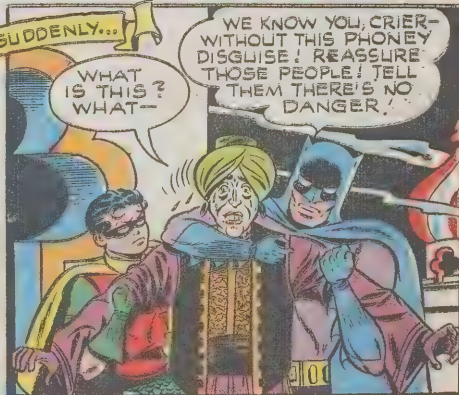
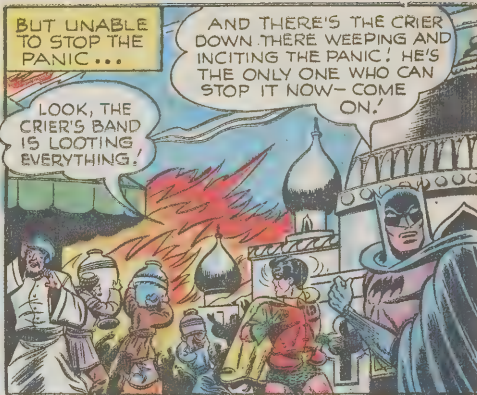


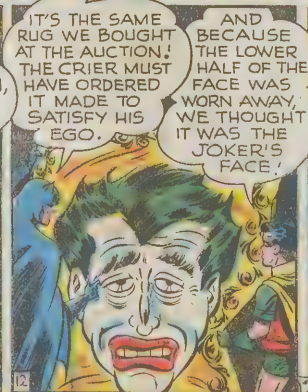
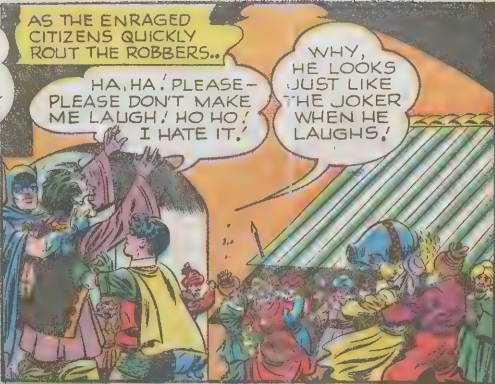
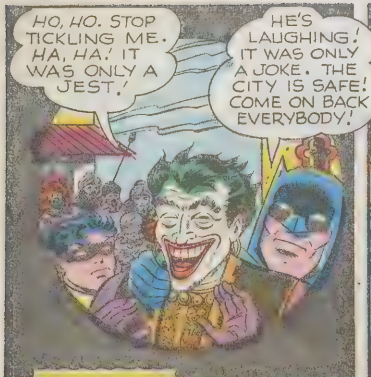
BUT, UP IN THE HILLS ABOVE THE CITY, BATMAN AND ROBIN HAVE COMPLETED HASTY CONSTRUCTION OF A MAKESHIFT GLIDER!





BATMAN

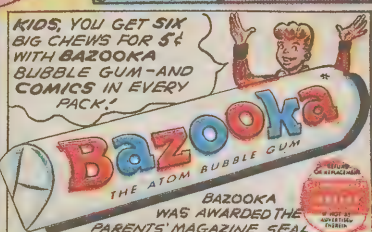
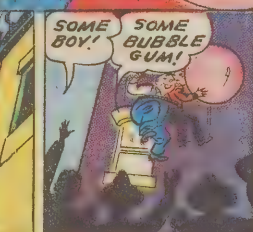
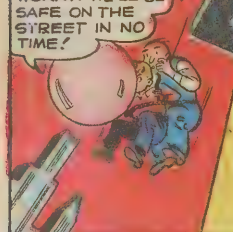
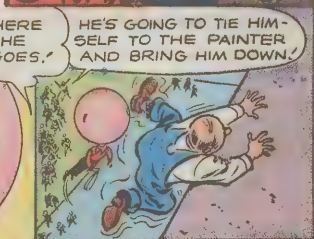
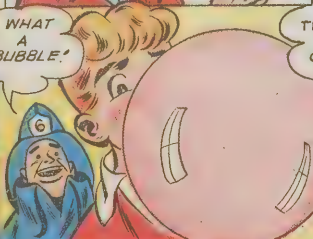
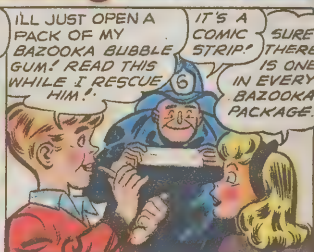
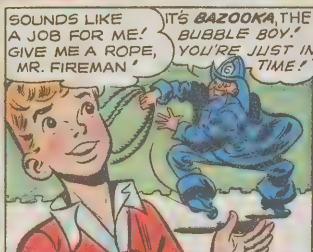




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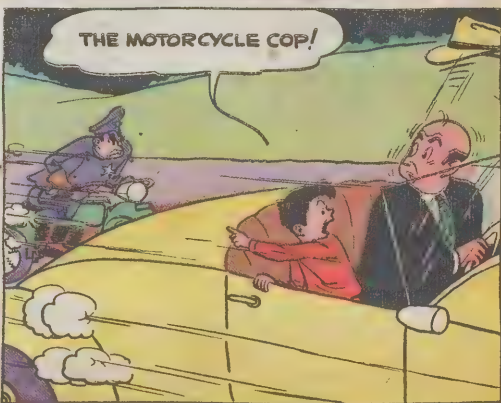
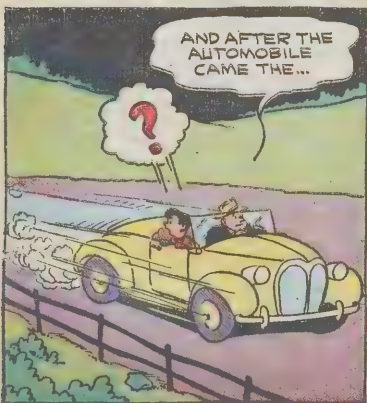
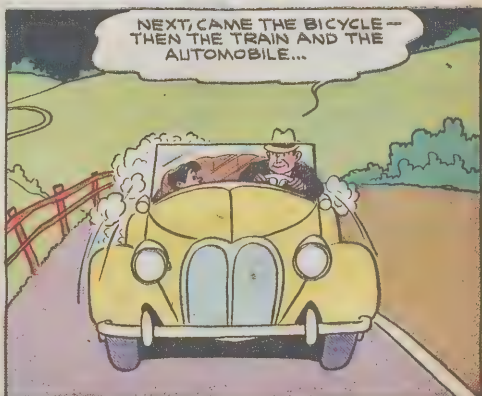
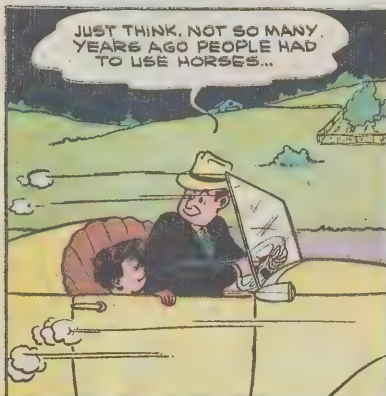
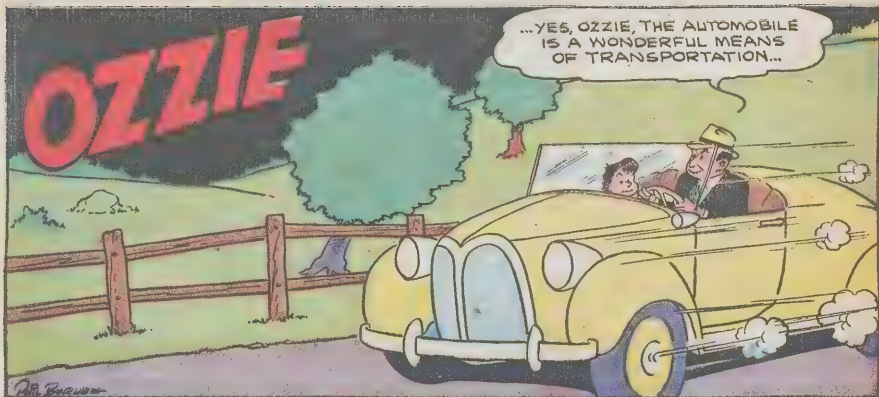
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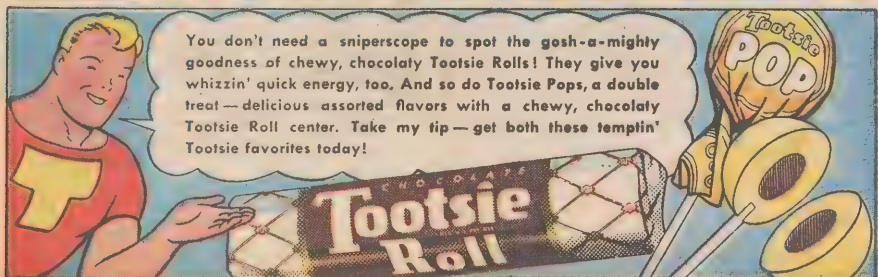
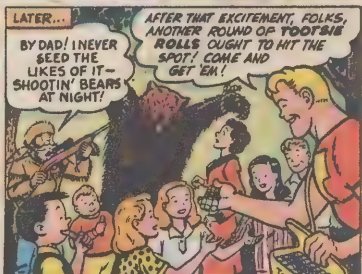
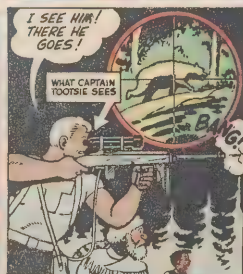
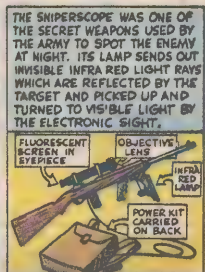
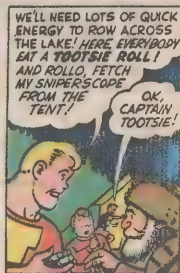
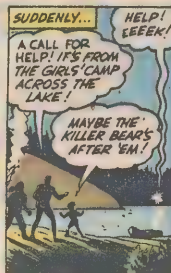
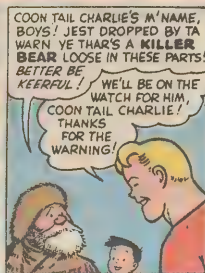
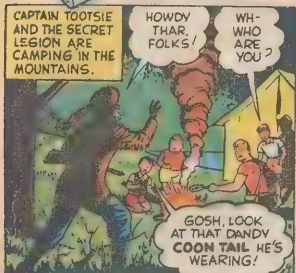
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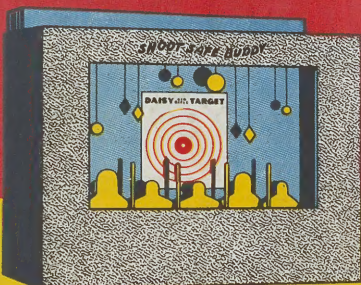
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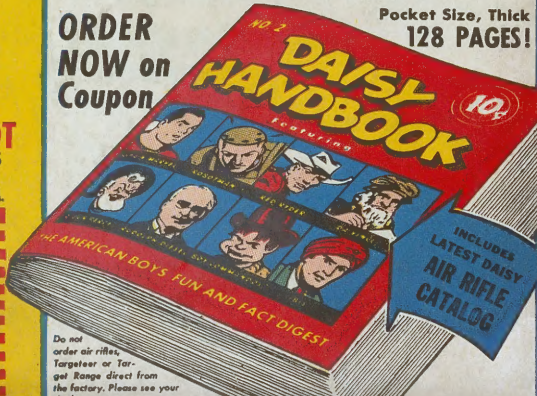
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